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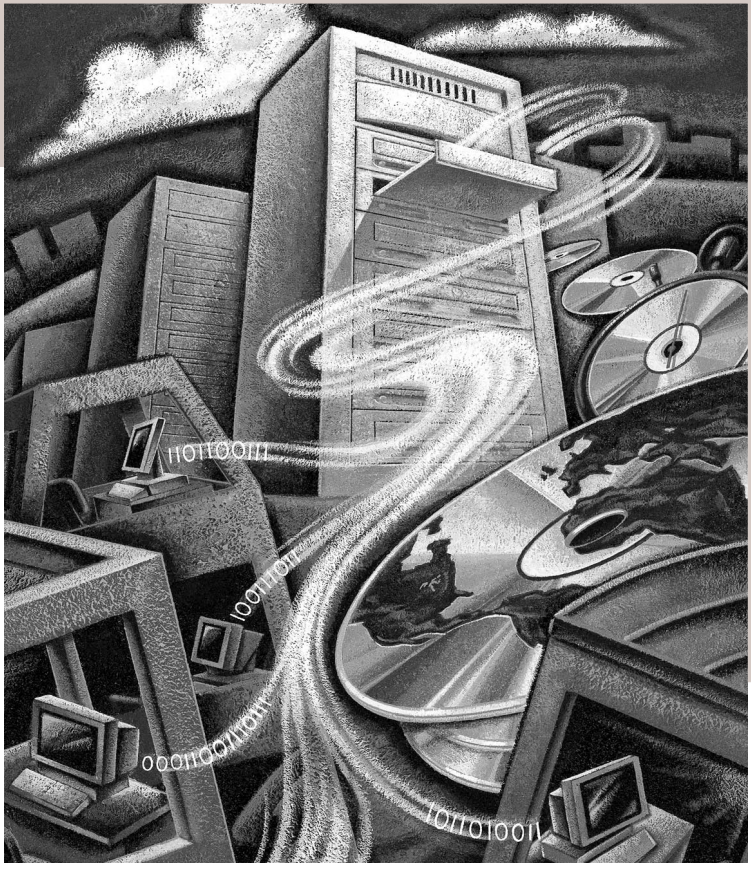

HP J3278B
HP J4150A
HP J4152A

User's Guide

HP SureStore CD/DVD-ROM Server

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HP SureStore CD/DVD-ROM Server

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J3278B, J4150A, J4152A

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For warranty service information, see appendix B in this guide.

Hewlett-Packard Company
8000 Foothills Boulevard
Roseville, California
95747-6588

Safety Considerations

Prior to the installation and use of this product, review all safety markings and instructions.

	Instruction Manual Symbol. If the product is marked with this symbol, refer to product manuals to protect the product from damage.
WARNING	Denotes a hazard that can cause injury
CAUTION	Denotes a hazard that can damage equipment or data.

Do not proceed beyond a **WARNING** or **CAUTION** notice until you have understood the hazard and have taken appropriate precautions.

Use of control, adjustments, or performance procedures other than those specified herein may result in hazardous radiation exposure.
To prevent direct exposure to a laser beam, do not try to disassemble the CD-ROM and DVD-ROM drives.

Grounding. This product provides a protective earthing terminal. There must be an uninterruptible safety earth ground from the main power source to the product's input wiring terminals, power cord, or supplied power cord set. Whenever it is likely that the protection has been impaired, disconnect the power cord until the ground has been restored.

If your LAN covers an area served by more than one power distribution system, be sure their safety grounds are securely interconnected.

LAN cables may occasionally be subject to hazardous transient voltages (such as lightning or disturbances in the electrical utilities power grid). Handle exposed metal components of the network with caution.

For more safety information, see the "Safety Statements" section starting on page D-4.

Servicing. There are no user-serviceable parts inside the user-replaceable modules comprising the product. Any servicing, adjustment, maintenance, or repair must be performed only by service-trained personnel.

Preface

About This Guide

This *User's Guide* aids in installation and use of the HP SureStore CD/DVD-ROM servers. These are HP product numbers J3278B, J4150A, and J4152A, with firmware version 5.xx and later.
This guide consists of the following chapters:

1. Introduction. A brief description of HP CD/DVD-ROM servers — how they work, where to use them, and their benefits.
2. Installing Your Server. A description of the server towers and the steps to install and connect them to your network. How to use the CD-ROM and DVD-ROM drives and the discs.

Each of the following four chapters details the procedures for setting up the server for your network, including getting access, controlling access, and configuring. Use each of the chapters relevant to the type of networking on your servers and clients in the following order. (For example, for TCP/IP with Microsoft Windows, follow chapters 3 and 4 and skip chapters 5 and 6.)

3. Setup for Internet Protocol (IP, HTTP) networks.
4. Setup for Microsoft and OS/2 networks (SMB).
5. Setup for Novell networks.
6. Setup for UNIX networks (NFS).

The remaining chapters are useful for all network types:

7. Configuration Reference for All Networks.
   Reference information useful for configuration and management on all network types. Chapters 3–6 have some references to information in this chapter.
8. Caching and Archiving Using the Hard Disk (J4150A only).
9. Upgrading the Firmware.
10. Troubleshooting. Solving problems with the servers.

The appendices provide supplemental reference information—technical and regulatory specifications, and support and warranty services.

Quick Reference

Accompanying this *User's Guide* is the *Quick Installation Guide,* a simpler reference for initial installation in most environments.

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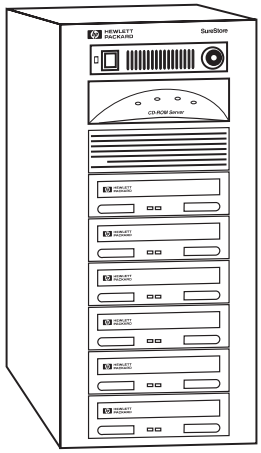
Introduction



HP SureStore CD-ROM Server
HP SureStore CD-ROM Server Plus
HP SureStore CD/DVD-ROM Server

The HP SureStore servers connect CD-ROM and DVD-ROM drives to twisted-pair networks—either IEEE 802.3i 10-Base-T Ethernet or IEEE 802.3u 100Base-TX Fast Ethernet. All users on the network can share the information on any CD or DVD in the tower. The server module located in the top bay of the 8-bay server tower is internally connected to the other 7 bays containing DVD-ROM or CD-ROM drives.

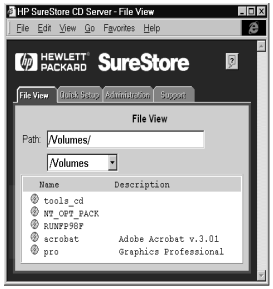
The SureStore CD-ROM Server Plus uses one of the drive bays for a hard disk drive, which adds a cache and archive repository to serve 34 full-capacity CDs simultaneously.

The SCSI bus used on these servers is extendable to another SCSI accessory tower, the seven-bay HP J4148A SureStore CD Expansion Tower. The two towers together serve up to 14 drives (41 CDs when used with the Server Plus).

How They Work

HP SureStore CD- and DVD-ROM servers directly connect as nodes on an Ethernet network. The product acts as a network file server, so that a network client communicates directly with it. This results in high performance and reliability. Since each of the three products acts as a server, this guide will use the term “server” to refer to any of these tower products on the network.

Installation and configuration is simple. In most environments, the network connection is the only installation required prior to using the server. There is no software that must be installed on clients or file servers. Your computer will see the server simply as another network file server, and you access it using standard network operating system commands.



The server also supports the HTTP protocol. Therefore, you can access and manage it using a standard web browser, such as Netscape Navigator or Microsoft Internet Explorer.

You can also remotely manage the server as a node in your network using popular network management applications.

Where to Use Them

HP SureStore CD/DVD-ROM servers can be used in networks supporting one or more of the following basic messaging and network protocols:

- Novell NCP (NetWare Control Protocol) over IPX/SPX
- Novell NCP over NetWare/IP
- Microsoft networking—SMB (Server Message Block) over NetBEUI (NetBIOS Extended User Interface)
- Microsoft networking—SMB (Server Message Block) over NetBIOS/TCP/IP
- NFS (Network File System) over UDP/IP
- HTTP (HyperText Transfer Protocol) over TCP/IP (Internet Protocol) for access from a web browser

Network clients that use these networking protocols can *simultaneously* access the server. Refer to appendix C for more information.

Novell NetWare Networks The server can emulate Novell file servers running NetWare 3, 4, and 5. No NLM is required.

Microsoft and IBM Networks The server is easily shared using the SMB (Server Message Block) protocol, the default protocol in popular PC systems (such as Microsoft Windows 95, 98, NT 3.51, NT 4.0, and OS/2 Warp systems).

UNIX Networks The server can be mounted using NFS (Network File System).

Internet/Intranet Networks The server is accessible from a web browser in environments that can use HTTP over TCP/IP (Internet Protocol).

Apple Macintosh Networks The Macintosh requires the NFS protocol (Network File System).

Note

❑ Contact your NOS vendor to verify your Year 2000 readiness.

Features and Benefits

Complete Solution for the Task	The HP CD/DVD-ROM server towers can be installed on the network in minutes, versus hours for other solutions (such as towers attached to file servers).
File Server Independence	The server is pre-installed with all the network functionality required. It does not rely on intermediate communications with a file server.
Ease of Use	These servers are designed to be easy to install and use. Software from disks is not needed to install the server. The server uses standard networking protocols (HTTP, NCP, SMB, and NFS), so there is no need to learn any special software to access it. Users find their data by mapping individual disc drives or the entire server (with a subdirectory for each disc) to be a logical network drive, or by using their browser to access the built-in web server.
Location Flexibility	As a network node, the server tower can be located anywhere on the network, such as in the workgroup where users can update new CD content as it arrives. It can be rack mounted in HP racks.
Up-to-Date Data	Since all users share a common set of discs, they are assured of using the correct set of data.
Broad Compatibility and Flexibility Now and Later	As a multi-protocol device, the server simultaneously supports various network operating environments, including Novell NetWare, Microsoft and IBM network operating systems (Windows 95/98, Windows NT, OS/2), UNIX, and Internet/intranets. Or it can function with only one protocol enabled. New firmware can be downloaded to Flash memory to support new features and future network operating systems. The HP SureStore CD-ROM Server and HP SureStore CD-ROM Server Plus read CD-ROMs. The HP SureStore CD/DVD-ROM Server with its DVD-ROM drives is ready for the future. These drives read DVD-ROM, CD-ROM, CD-R, and CD-RW media. The server can be extended to up to 14 drives when needed, using the HP SureStore CD Expansion Tower with your server tower. Either a 10Base-T or a 100Base-TX network can be connected.
Web Server Functionality	Users can access discs using a web browser, such as Netscape Navigator or Microsoft Internet Explorer, and network managers can configure and manage the server using a web browser.

Security	Disc access can be restricted by setting up password protection. The number of simultaneous users of any disc can be limited to comply with license agreements. Or, user access can be administered using the network operating system's authentication provisions, such as Novell's NDS (NetWare Directory Services) and Microsoft's Windows NT 4.0 domains.
Speed	These servers take advantage of 100-Mbit/s networks. The 32-bit processor and cache memory allow ample throughput for demanding CD- and DVD-ROM applications. The HP Multi-Disc Cache on the Server Plus provides file caching for reading CDs at hard-disk speeds. HP's drives seek data quickly. See appendix C for drive speed specifications.
Scaling	HP Multi-Disc Cache on the Server Plus provides an archive repository that automatically uploads CDs. Then you can use those drives to load more CDs. You can remove and replace CDs in the repository. (Adding the Expansion Tower can provide 41 full-capacity CDs for simultaneous access.)
Upgradability	New firmware can be easily downloaded to the server's Flash memory over the network. URL: `http://www.hp.com/go/cdrom_server` (You can also find technical support information at that World Wide Web site. Check with an HP-authorized dealer for additional assistance).
Remote Management with Web JetAdmin and Others	Hewlett-Packard's Web JetAdmin automatically locates and monitors multiple CD/DVD-ROM servers from a single console. Other leading management applications that support the Simple Network Management Protocol, SNMP, can also manage the servers.

Installing Your Server Tower

The Products

HP J3278B SureStore CD-ROM Server

This tower has a server module in the top bay, and high-speed HP SureStore CD-ROM drives pre-installed in the other seven bays.

HP J4150A SureStore CD-ROM Server Plus

This tower has a server module in the top bay. A large internal hard drive is installed in the second bay, providing HP Multi-Disc Cache for storing copies of CDs and providing increased performance for all CDs. High-speed HP SureStore CD-ROM drives are pre-installed in the other six bays.

HP J4152A SureStore CD/DVD-ROM Server

This tower has a server module in the top bay, and high-speed HP DVD-ROM drives pre-installed in the other seven bays. These drives read both CD and DVD-ROM discs.

SCSI Features

All the towers have an expansion SCSI connector for attaching a second tower with seven more drives, such as the HP J4148A SureStore CD Expansion Tower with its seven CD-ROM drives. See “HP J4148A SureStore CD Expansion Tower” on page 2-3 for attaching the tower.

The SCSI bus is terminated at one end by the server module and at the other end by an internal active terminator on the backplane.

The SCSI IDs are set automatically based on the position of the HP drives in the tower. The topmost drive in the tower (CD or DVD or hard disk) is assigned ID 0 (zero), the second drive (CD or DVD) is assigned ID 1, and so on, and the lowest drive is assigned ID 6.

Unpacking Components

Unpack and inspect all parts for damage. Contact your dealer if anything is missing.

- Server tower. Installed modules vary; see page 2-1.
- *User's Guide,* this manual (HP part no. 5967-9962)
- *Quick Installation Guide* (HP part no. 5967-9968)
- 2 front-cover keys (HP replacement part no. 5183-7741)
- Emergency Ejection Pin (HP part no. 5064-7172)
  (Only for HP J4152A SureStore CD/DVD-ROM Server)
- Power cord for your country, one of the following:

Region or Country	Part Number
USA, Canada, Brazil, Mexico	8120-6805
Argentina	8120-6871
Chile	8120-6979
Europe	8120-6802
Denmark	8120-6806
Switzerland	8120-6807
United Kingdom	8120-8709
South Africa, India	8120-6808
Australia, New Zealand	8120-6803
Israel	8120-6799
China	8120-8376

CAUTION! ❑ If your installation requires a different power cord than the one supplied with the server, be sure to use a power cord displaying the mark of the safety agency that defines the regulations for power cords in your country. The mark is your assurance that the power cord can be used safely with the server.

Optional: Expanding the Tower

HP J4148A SureStore CD Expansion Tower

This expansion tower provides the additional bays for expanding beyond the drives in the server tower. It includes a SCSI cable to connect the two towers and an external active HP SCSI terminator to be installed on a rear SCSI connector. SCSI IDs are set automatically on HP CD-ROM drives based on their position in the tower. The topmost position on this accessory tower is ID 0 on the second SCSI bus "B", and the lowest position is ID 6 on the second SCSI bus "B". All 14 drives are read by the server module located in the server tower.

Consult the *User's Guide* accompanying the expansion tower for its specific installation instructions. Complete the SCSI cable connection to the server tower, the SCSI termination connection, and the power cord connection as directed in that guide. The "Steps to Connect the Towers" (below) include the steps needed to start up both towers.

Note

- ❑ To install the expansion tower after the server tower has been installed, you must *switch off power* to the server tower before installing the expansion tower. After installing the expansion tower, follow the "Steps to Connect the Towers" to restart the server tower.

Steps to Connect the Towers

Before You Begin

- Verify with your network administrator that a 10Base-T (Ethernet) or 100Base-TX (Fast Ethernet) network connection is ready for the server tower. Locate the twisted-pair network cable (with an RJ-45 connector).
- Verify that the tower's power is ***off***.

CAUTION!

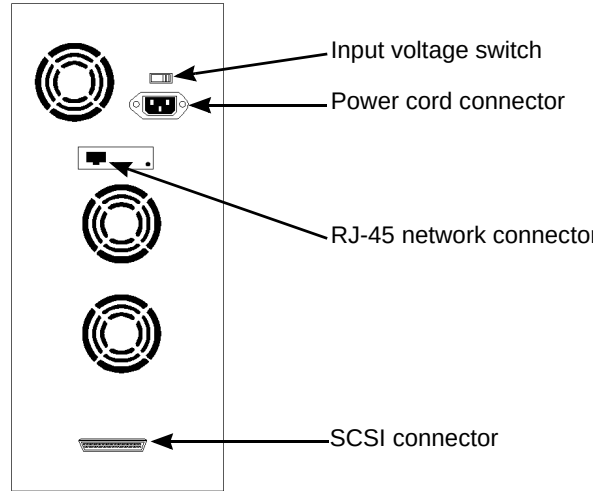
- Verify that the power supply input voltage is set according to the power standards in the country of use; set the voltage switch on the rear of the tower (see the illustration on the next page) to 115 volts or 230 volts. Also verify that the power cord is appropriate for the country of use (see page 2-2).

CAUTION! The SCSI bus may be damaged if you connect or disconnect any units when the power is on.

- If you are expanding the server tower (using its rear SCSI connector illustrated below), you must complete all cable and termination connections on both towers *before* you apply power. Apply power to the expansion tower *before* you apply power to the server tower. See also page 2-3.

Optional: Rack Mounting

- You can use the HP C2982A CD-ROM Tower Rackmount Kit to mount the tower in one of the following 19” racks:
  - HP J1464A Rack System/U25
  - HP J1466A Rack System/U33
  - HP J1500A Rack System/E41
  - HP J1501A Rack System/E33
  - HP J1502A Rack System/E25



Steps

1. Attach the power cord to the rear of the tower and to the power line source. *Do not switch on* power yet.

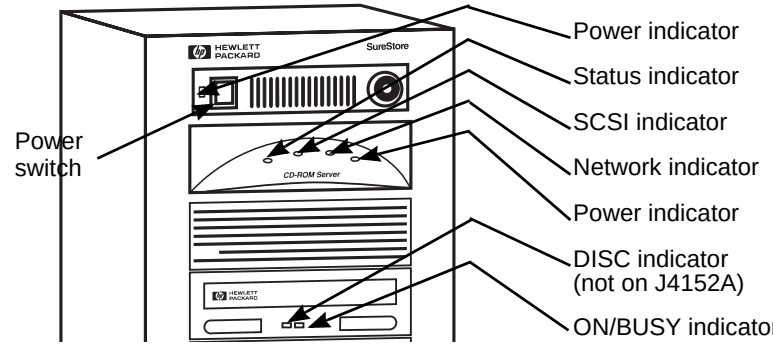
Note

❑ If you are also installing the HP J4148A SureStore CD Expansion Tower, now install its power cord and switch on its power.

⚠

2. Attach the network cable to the RJ-45 connector on the rear of the tower.

3. On the front of the tower, switch on power. Verify that:



   - The **ON/BUSY**or **BUSY** indicators on the HP CD-ROM or DVD-ROM drives go ***on***.
   - The 4 indicator lights on the server module (illustrated above) go ***on*** at the beginning of the power-on self-test.

   When the **Status** indicator remains ***green*** and the **SCSI** indicator is ***off***, the server is ready for use. Depending on the number of drives in use, this may take a few seconds to five minutes.

   The server auto-negotiates the link speed—10 or 100 megabits per second—with other devices on the network.

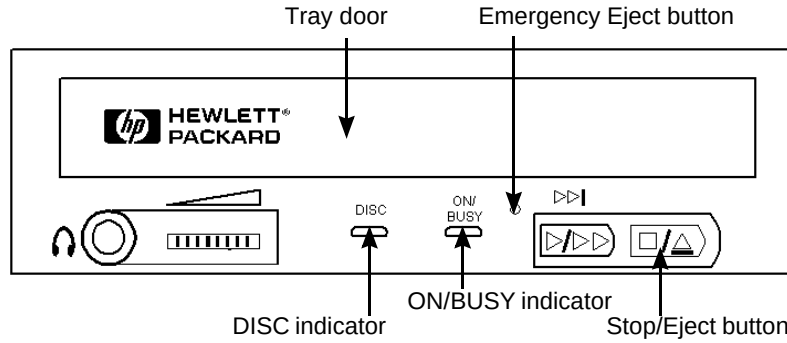
4. Load a compact disc into the tray of a CD-ROM or DVD-ROM drive (see page 2-6 or page 2-7). Verify that:

   - *A CD-ROM drive's* **ON/BUSY** indicator ***blinks*** and then turns ***off*** shortly, and its **DISC** indicator goes ***on***. If either one ***flashes*** continuously, then either the disc is not standard or there is a problem with the drive; refer to chapter 10, "Troubleshooting".
   - *A DVD-ROM drive's* **BUSY** indicator ***blinks***. If it remains ***on*** continuously, then either the disc is not standard or there is a problem with the drive; refer to chapter 10, "Troubleshooting".
   - The server's **SCSI** indicator ***blinks*** during access. If it does not, then verify your connections and cycle power (switch power ***off*** and wait 10 seconds and then switch power ***on*** again) to the server tower. If **SCSI** still does not ***blink***, refer to chapter 10, "Troubleshooting".

Repeat step 4 for all CD/DVD-ROM drives (including those in an expansion tower).

How to Use HP SureStore CD-ROM Drive

Example Drive



- Tray door: Press Stop/Eject button to open door. Insert CD into drawer. Press Stop/Eject button to close door.
- Stop/Eject button: Push to eject CD. This will not work if the power is off or if ejection has been disabled by configuration. If you have eliminated these possibilities and still have difficulty ejecting a disc, see "Emergency Eject" below.
- Emergency Eject button (recessed): If the automatic Stop/Eject button does not work although power is on and ejection is enabled in the configuration, you may have to use this method of disc ejection as an last resort. Switch off power. Insert a paper clip or other thin rigid object in this hole to press the recessed button to eject the CD.
- **ON/BUSY** indicator: ***On*** (yellow) when power is switched on. ***Blinking*** continuously when CD is inserted and being accessed. ***Off*** when CD is inserted and not being accessed.
- **DISC** indicator: ***On*** (green) when power is on and CD is inserted. ***Off*** if no CD is inserted.

Loading and Operation

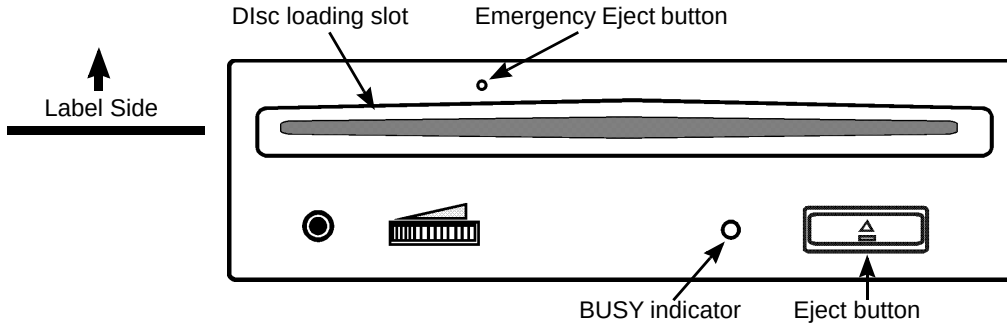
1. While the drive is powered up, push the Stop/Eject button. The tray drawer will slide out in 2-3 seconds.
2. Lay the bare CD into the depression in the tray, label side up. For rack-mounted servers, the label side faces the server module; secure the CD in place by sliding the three clips over it.
3. Press the Stop/Eject button again, and the tray will slide shut within 2-3 seconds.

Note

- ❑ We recommend you use the Stop/Eject button to close the tray in a smooth and secure manner. Closing the tray by pressing the front of the drawer by hand is not recommended.

How to Use HP DVD-ROM Drive

Example Drive



- Disc loading slot: Insert a CD or DVD disc into this slot with the label side up (or for rack-mounted servers, with the label side facing the server module).
- Eject button: Push to eject the disc. This will not work if the power is off or if ejection has been disabled by configuration. If you have eliminated these possibilities and still have difficulty ejecting a disc, see "Emergency Eject" below.
- Emergency Eject button (recessed): If the automatic Eject button does not work although power is on and ejection is enabled in the configuration, you may have to use this method of disc ejection as an last resort.

CAUTION!

❑ Switch off power to the tower and wait 10 seconds before doing this procedure.

Insert the emergency ejection pin (supplied in the product package) into the access hole until the disc ejects. (If the pin is lost, you may substitute a $^{1}/_{16}$" hex key (Allen wrench.) Do *not* use a paper clip; it is not rigid enough and may damage the drive! Then restart the server tower.

- **BUSY** indicator: ***On*** (green) when power is switched on. ***Blinking*** when an inserted disc is being accessed. ***Off*** when no disc is inserted or the disc is not being accessed, or there is a problem (see page 10-3).

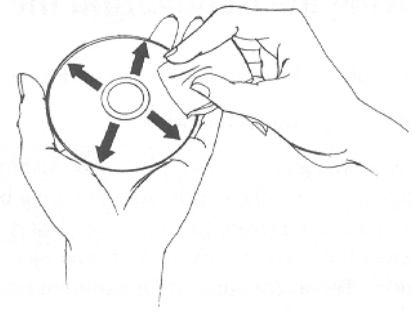
Loading and Operation

Press the Eject button to eject any disc currently in the slot. Insert the CD or DVD disc into the slot with the label side up (or for rack-mounted servers, with the label side facing the server module). The **BUSY** LED goes ***on*** while the disc initializes; it goes off when the disc is ready for access.

⚠ Care of CD/DVD-ROM Discs

Always store a disc in its protective case or sleeve when not installed in a CD or DVD drive. Store it at temperatures between +10° and +60° C (+14° F to +140° F). Allow the disc to stabilize after moving it from one temperature extreme to another, before using it.

Check each DVD and CD periodically to determine if it needs cleaning. If the disc is dusty, you can use a commercially available dust removal spray to blow off dust particles. After removing the dust particles, you can wipe the disc using a clean, soft cotton cloth. Use a straight-line motion, wiping from the center to the outside edge in a non-circular motion.



Correct Procedure for Cleaning a Disc

If a disc becomes dirty or soiled with grease or other contaminants not removable by wiping, you can clean it with a CD disc cleaner available at most computer dealers. Follow the directions packaged with the cleaner. Do not use other cleaning solutions.

CAUTION! Do Not:

- ❑ Touch the surface of a disc with your fingers.
- ❑ Scratch the reflective top or bottom surface of the disc.
- ❑ Drop the disc.
- ❑ Expose the disc to dirt, moisture, or high humidity.

3

Setup for IP Networks and HTTP

If you are running TCP/IP on your network, this chapter describes the basic procedures for getting access to the discs from the client workstations, for both required and optional configuration for IP network, and for access control related to IP. In addition, any workstations running HTTP (HyperText Transfer Protocol) over TCP/IP can use a web browser to most easily access discs and to do any configuration you need for the HP CD/DVD-ROM server.

Many workstations are running other client and transport protocols in addition to TCP/IP, such as Microsoft networking (covered in chapter 4), Novell NetWare products (covered in chapter 5), and NFS (covered in chapter 6). We recommend that you perform the additional protocol-specific procedures, such as mapping drives (mounting) for easy client usage of CD-ROM and DVD-ROM information. This chapter includes some references to those procedures in the other chapters.

Novell NetWare/IP, whether used in combination with IPX or under TCP/IP alone, requires you to follow the configuration instructions in “Novell NetWare/IP” on page 5-17 also.

Set the IP Address for the Server

Required Procedure

Before you can configure and use the server in the TCP/IP environment, you must cause an available Internet Protocol (IP) address to be assigned to the server. On some systems, you also may need a unique host name to associate with the IP address. This section provides these procedures.

Before You Begin

- Confirm with the network administrator that you may proceed with network configuration.
- Obtain an unused IP address from the network administrator.

Note

❑ Do not use the factory-default IP address (192.0.0.192) when installing the server. Do not assign an IP address before consulting the network administrator.

- If Using DNS or WINS Host Names:

  Obtain the unique host name from the network administrator. Then associate it with the HP CD/DVD-ROM server's IP address on your DNS server, using the appropriate procedures for your server. Consult your network administrator or your system manuals.

Note

❑ If you intend to use WINS, you must enable WINS when you configure your server later. (See "Methods for Configuration" on page 3-11 and access the IP configuration.)

- Note the LAN hardware address (MAC address) printed on the LAN Address label attached to the server or (top of) the tower. The address is in the form of twelve hexadecimal digits, such as 0060B0*hhhhhh* (where *h* is a hexadecimal digit).
- Verify that the server is powered up and connected to the network.
- To use a UNIX system to do one of the procedures in this section, obtain *root* privileges.
- To use Windows NT or UNIX to do a DHCP or BOOTP procedure in this section, obtain *administrator* privileges.

Methods for Assigning the IP Address

In this section the methods are summarized, and then each specific procedure is given. The methods available to you for assigning the IP address to the server depend on your network operating system. Descriptions of each method state which operating systems can use the method.

Choice of Manual Methods

1. **ARP** (Address Resolution Protocol) is the easiest method to use on supported systems—Windows NT and UNIX. Details are found on page 3-4 to page 3-5. It requires that the IP address is sent to each new device individually. ARP is not routable; the workstation from which the configuration is made must be located on the same network segment as the server.
2. Editing and saving the `config.ini` file for the server is a method usable in any Microsoft Windows or Novell NetWare environment. It requires precision in editing the text of the file, however. See page 3-6 for the details.

Choice of Automated Methods

1. **RARP** (Reverse Address Resolution Protocol) downloads the IP address to each device automatically. It requires a *rarp* daemon on your system. RARP operates within a single network segment only. RARP can be implemented by using UNIX; see the details on page 3-6.
2. **BOOTP** (Bootstrap Protocol) is similar to RARP, but operates on the entire network. It requires a *bootp* daemon on your system. BOOTP can be implemented by using UNIX or Windows NT's DHCP server; see the details on page 3-7 or page 3-8.
3. **DHCP** (Dynamic Host Configuration Protocol) allows for the automatic but temporary assignment of IP addresses from a predefined pool of addresses. Note that this address may change and disrupt users. In the absence of either an active *rarp* or *bootp* daemon running on the host, DHCP when enabled will cause the selected host to automatically allocate and download a free IP address, a default gateway (router) address, and a subnet mask to the requesting HP CD/DVD-ROM server. It also sets how long the IP addresses will remain valid. DHCP can be implemented by using UNIX or Windows NT.

Note

- Only one of the RARP, BOOTP, or DHCP methods should be enabled on a network at the same time. If both a BOOTP and a DHCP server on the network provide an IP address, then the BOOTP address is used. If both a RARP and a BOOTP or DHCP server provides an IP address at the same time, the results are undefined.

Windows 95/98/NT: Using ARP

To assign the IP address in Windows 95, 98, or NT by using the `arp` command, first access the DOS prompt window.

Note: Windows95 Only

- Due to a Windows95 TCP/IP issue, a Windows95 workstation needs an existing entry in its ARP cache table. You can check to see if there are any entries by executing a `ping` command to a valid address on your network, such as your default gateway.

Then perform the `arp` and `ping` commands shown below.

Note

- The *<LAN-address>* can be found on the LAN Address label on the tower (top) or server; each pair of digits must be separated by a hyphen.

```
arp -s <IP-address> <LAN-address>
ping <IP-address>
```

Example:

```
arp -s 192.124.138.80 00-60-b0-11-00-86
ping 192.124.138.80
```

The host returns "`Request Timed Out`" messages and "`Reply from 192.124.138.80`...", indicating that the address has been set and that communication with the server is established.

Notes

- When you execute the `ping` command for the first time, the response time may be longer than usual. The `ping` command enables the server to assign itself the address.
- You may set (and change) the IP address using this method only in the approximately one-half hour immediately following startup in the factory-default state. This inhibits accidental or unauthorized IP address changes after this period.

Restart the server (cycle its power).

UNIX: Using ARP

To assign the IP address in UNIX by using the `arp` command, perform the commands shown below.

Note

- The *<LAN-address>* can be found on the LAN Address label on the server or (top of) the tower; each pair of digits must be separated by a colon.

```
arp -s <IP-address> <LAN-address> temp
ping <IP-address>
```

Example:

```
arp -s 192.124.138.80 00:60:b0:11:00:86 temp
ping 192.124.138.80
```

The host will return a message similar to "`192.124.138.80 is alive`", indicating that the address has been set and that communication with the server is established.

Note

- The `arp -s` command may vary between different systems. Some BSD-type systems expect the IP address (or host name) and LAN address in reverse order. IBM AIX systems require the additional argument `ether` for Ethernet networks, for example:

```
arp -s ether salesdept 00:60:b0:11:00:86 temp
```

- When you execute the `ping` command for the first time, the response time may be longer than usual. The `ping` command enables the server to assign itself the address.
- You may set (and change) the IP address using this method only in the approximately one half hour immediately following startup in the factory-default state. This inhibits accidental or unauthorized IP address changes after this period.

Restart the server (cycle its power).

Windows and NetWare: Editing the `config.ini` File

To assign the IP address by editing the `config.ini` file, you must first set up access to the server from a workstation on the network, using the instructions for "Client Access to Discs" in chapter 4 or 5, for your client networking protocol.

Use a text editor to open the `config.ini` file in the `ServerProperties` folder in the `System` folder on the server. Edit the `InternetAddress` parameter in the IP section.

CAUTION!

- Make sure there is a space between the equal sign and the parameter value. All other spaces between names of parameters or values are ignored. Do not remove the `[END]` marker from the file.
- You must save the file and restart the server to activate the new settings. You can do this by setting the `Restart` parameter in the `config.ini` file to `yes` and saving the file. Instead of setting `Restart` in the file, you can save the file first and then switch the server's power ***off***, wait 10 seconds, and switch power ***on***.

  The new settings are ready for use when the server completes its restart. See page 2-5.

UNIX: Using RARP

To assign the IP address in UNIX by using RARP:

1. Append the following entry to your LAN (MAC) address table, typically: `/etc/ethers`. The *<LAN-address>* can be found on the LAN Address label on the server or (top of) the tower; each pair of digits must be separated by a colon.

   ```
   <LAN-address>          <host-name>
   ```

   Example:

   ```
   00:60:b0:11:00:86      cdserv
   ```

2. Make sure the host table and alias name databases are updated as required by your systems.
3. Start the *rarp* daemon (if not already running), typically by using the command: `rarpd -a`
4. Restart the server (cycle its power).

UNIX: Using BOOTP

To assign the IP address in UNIX by using BOOTP:

1. Obtain *administrator* privileges.
2. Append the following entry to your boot table, typically `/etc/bootptab`).

```
<hostname>:ht=<hardwaretype>:vm=<vendormagic>:\
:ha=<LAN-address>:ip=<IP-address>:\
:sm=<subnetmask>:gw=<gatewayfield>
```

Example:

```
cdserv:ht=ether:vm=rfc1048:\
:ha=0060b0110086:ip=192.124.138.80:\
:sm=255.255.255.0:gw=192.124.138.254
```

Notes

- `hostname` is the DNS host name.
- The `ht` and `vm` fields must be entered exactly as in the example. For Ethernet, `ht=ether`.
- In the `ha` field, for *<LAN-address>* use the address found on the server or (top of) the tower. As in the example, use no separators between its digits.
- In the `ip` field, for *<IP-address>* use the IP address assigned by the network administrator.
- The `sm` field *(subnet mask)* determines when the traffic should be sent through a router. For example, the normal class C mask is 255.255.255.0. The mask 0.0.0.0 indicates that automatic router sensing is used.
- The `gw` field *(default gateway or router address)* identifies the router which is sent all traffic directed outside the local network (according to the subnet mask).

3. Make sure the host table and alias name data bases are updated as described in "If Using DNS or WINS Host Names:" on page 3-2.
4. Start the *bootp* daemon (if not already running), typically by using the command: `bootpd -a`
5. Restart the server (cycle its power) to download the IP address, default gateway address, and subnet mask.

UNIX: Using DHCP

To assign the IP address in UNIX by using DHCP:

1. Obtain *administrator* privileges.
2. Edit or create a scope in the DHCP manager of the *dhcp* daemon. The entries made in this scope should include:
   - Subnet mask
   - Default router Internet address
   - NetBIOS over TCP/IP name server Internet address(es)
   - NetBIOS over TCP/IP node type
     Node type: The server can act either as a B Node (WINS disabled), or as an H Node (WINS enabled).
   - NetBIOS over TCP/IP scope ID
   - Lease duration
3. Activate the scope.
4. DHCP must be left configured to the default of enabled.

Windows NT: Using DHCP

To assign the IP address in Windows NT by using DHCP:

1. Obtain *administrator* privileges.
2. Install the DHCP service on an NT server.
3. Open the DHCP Manager (in Administrative Tools).
4. In the Server menu, use Add DHCP Server to Server List to enter the IP address of each DHCP server on the network.
5. In the Scope menu for a specific server, select Create. Enter:
   - Range of IP addresses in a subnet that can be leased
   - Subnet mask for the address range
   - IP addresses to be excluded from the scope
   - Lease duration (can be defaulted)
   - Scope name
6. Using the DHCP Options, configure the Default Gateway if the default 0.0.0.0 is not appropriate.
7. Select Activate in the Scope menu.

Client Access to Discs

Methods for Providing Access

For TCP/IP networks, two methods for client workstations to access the server and its discs are possible.

- A web browser can be used for access once an IP address is assigned (see the section starting on page 3-1).
- Clients can map drives to the server, a CD/DVD-ROM drive, or a particular disc on a drive.

HTTP: Using a Web Browser

The HP CD/DVD-ROM server supports HTTP over TCP/IP. This means that the server works as a web server. To access the server's web page, you must first configure the server with an IP address as described in the section starting on page 3-1.

Note

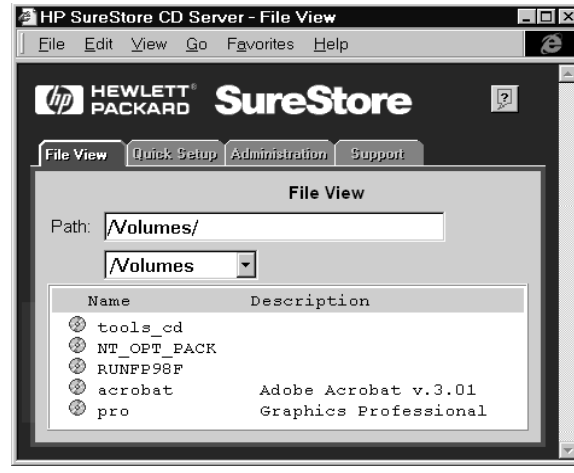
❑ After you set up web access to the server according to the procedure in that section, "Web (HTTP)" can be disabled and enabled in the server's configuration; the default is enabled. See "Disabling Access for Other Protocols" on page 3-13.

The server can be accessed using any standard web browser, such as Netscape Navigator or Microsoft Internet Explorer. The example here uses Internet Explorer.

1. Start Internet Explorer.
2. In the Address field, enter the URL of the server as:

   ```
   http://<IP-address>
   ```

   As an alternative to the IP address, you can use a host name associated with the IP address and assigned to the server.
3. The main web page for the server is displayed, as shown below.



Click on a disc to view a list of its contents. All users have access to this page under the File View tab. They can browse and access the discs listed according to access permissions set up by the administrator. You can disallow web access to the discs by disabling the Enable access to volumes via Web browser (HTTP) setting (see page 3-13).

Some discs contain an `index.htm` or `index.html` file that provides access to the disc contents on a web page you can use with the browser. If you click on such a disc, that web page will appear in place of the simple list. However, you can see the simple list rather than the index page by adding `/.` after the location address.

For easy access to your server resources, web pages can be saved in your web browser.

- Netscape Navigator: Bookmarks, Add Bookmark
- Microsoft Internet Explorer: Favorites, Add Favorite

Note

- ❑ Web browsers may save pages in local cache memory. In this case, if a disc in a drive is changed; returning to the File View will not show the changed disc. You must reload the web page.

Mapping Drives

An additional way to make the discs available to workstations on the network (clients) is the same as used with file servers: "mapping" the server to a drive letter on PC systems, or "mounting" on UNIX systems. After the server is mapped or mounted, the client accesses the server, with its discs (and optionally its configuration parameters), just like any other attached disk drive or networked file server.

The mapping or mounting procedure depends on the network operating environment and client system. Use the procedures in subsequent chapters as follows:

- Microsoft & IBM Networks (SMB) . . . . . chapter 4
  (Clients: Windows 95/98, Windows NT,
  Windows for Workgroups, OS/2, and DOS)
- Novell NetWare (NCP) . . . . . chapter 5
  (Clients: Windows 95/98, Windows NT,
  Windows for Workgroups, and DOS)
- UNIX (NFS) . . . . . chapter 6

Configuring the Server

By making configuration changes, you can customize server operation and can set access rights for security.

Configuration Tips

Some IP configuration changes you might need are listed below. Some of these items are detailed in this section.

- Set an IP address, as described in this chapter (page 3-1).
- Set up or change the server name for NetWare or for Microsoft networking clients (SMB), or change the domain or workgroup name for SMB. (See page 4-12.)
- Set up a password or other access rights restrictions, some of which are specific to other networking and client protocols. (See chapters 4, 5, and 6 for other protocols.)
- Disable server protocols, such as SMB on NetBIOS/NetBEUI, SMB on NetBIOS/TCP/IP, NetWare, and NFS, to prevent blanket access for protocols for which you have not restricted access.
- Disable disc access through web browsers.
- Set up Internet and SNMP parameters.
- Set the server's time synchronization.

Methods for Configuration

This chapter provides information for some of the configuration options, if they are general needs or relate specifically to TCP/IP networks. Configuration options specific to Microsoft networking, Novell NetWare, or UNIX/NFS are addressed in chapters 4, 5, and 6, respectively.

HP recommends the web method of configuration if a web browser and IP and HTTP are available. Text editing is an alternative method (see page 3-6).

Web Browser Configuration

Following step 3 above (page 3-9), select the Quick Setup tab for most configuration needs. The first time during a session, you will be prompted to enter the username (default is **`root`**) and password (default is **`pass`**).

You are prompted to supply:
username = root
password = pass
(factory defaults)

HP SureStore CD Server - Quick Setup for Network Settings
File Edit View Go Favorites Help
HEWLETT PACKARD SureStore
File View
Quick Setup
Administration
Support
Quick Setup for Network Settings
Enabled access protocols:
Web (HTTP)
Windows (SMB)
NetWare (NCP)
UNIX (NFS)
Configure the HP SureStore CD Server for your network environment using:
Wizard
The Wizard will guide you through the configuration procedures for each of the network protocols.
Detailed View
The detailed view allows you to manually set the configuration parameters. Use the Restart Server button (below) for changes to take effect.
Restart Server
View Settings

You have the choice of a configuration wizard—click on the Wizard icon—or detailed configuration settings—click on the Detailed View. The wizard leads you through the most basic settings, and then restarts the server when you click the Finish button at the end. The detailed configuration includes all the settings, and when finished you must click the Restart Server button to effect most settings that change how the server appears on the network.

If you need help, click the ? button to display the on-line help. You can display a table of all configuration settings. Click the View Settings button on this Quick Setup page.

Some general settings for the server are done under the Administration tab instead. (Some of the settings below are examples.) When those settings are saved, they do not require restarting the server to take effect. The View Settings button is also available under the Administration tab.

Disabling Access for Other Protocols

In the Detailed View (from the Quick Setup page), you can switch off all access to the server through other protocols for which you do not set up access restrictions.

Disable Microsoft Windows access by using the Windows (SMB) tab and disabling the NetBIOS Protocol Bindings for both NetBEUI and TCP/IP. Disable UNIX by using the UNIX tab and the Enable NFS setting. Disable NetWare by using the NetWare tab and the Enable NetWare setting.

Note

- Do *not* disable Web (HTTP) access. Maintain administrative access to the server through this web interface.

You must restart the server to effect Detailed View settings.

TCP/IP and Web (HTTP) Settings

The wizard for TCP/IP (from the Quick Setup page) allows you to set the correct subnet mask and default router to accompany the IP address. Clicking the wizard's Finish button causes the server to restart for the settings to take effect.

You can enable WINS on the Detailed View setup page for TCP/IP, or in the wizard for TCP/IP.

The Detailed View setup page for Web (HTTP) allows you to disable all access to the volumes through this web interface—the File View (see page 3-10).

Server Password

To protect the system files, it is important that you change the server password. For example, users are prompted for the server password when trying to access the Administration and Quick Setup web pages for the first time during a session. Under the Administration tab, click the This Server button and with the server module highlighted, click the Settings button. On the resulting page, select the General tab. Change and confirm the password. Click Save. This new password takes effect without restarting the server.

Automatic Time Synchronization

Setting up the Network Time Protocol

For automatic time synchronization you can use the Network Time Protocol (NTP, as defined by RFC 1769). Under the Administration tab, click the This Server button and with the server module highlighted, click the Settings button. On the resulting page, select the Date & Time tab. Select Automatically and network Time Protocol. Then for NTP Server, specify the IP address or Internet domain name of the time server.

Or you can use NetWare NDS Time Synchronization if your network runs NetWare (see page 5-18).

Access Rights: Web Security

The HP CD/DVD-ROM server can be configured to restrict user access to CD/DVD-ROM drives, to individual discs, and to the server configuration. You can limit the number of users simultaneously accessing any disc to comply with user-license restrictions.

By Networking Protocols

Access restrictions can be set individually for each protocol (NetWare NCP, Windows SMB, UNIX NFS, and Web HTTP). The default settings in some protocols provide full access rights to all users, so we recommend that you implement at least two access restrictions:

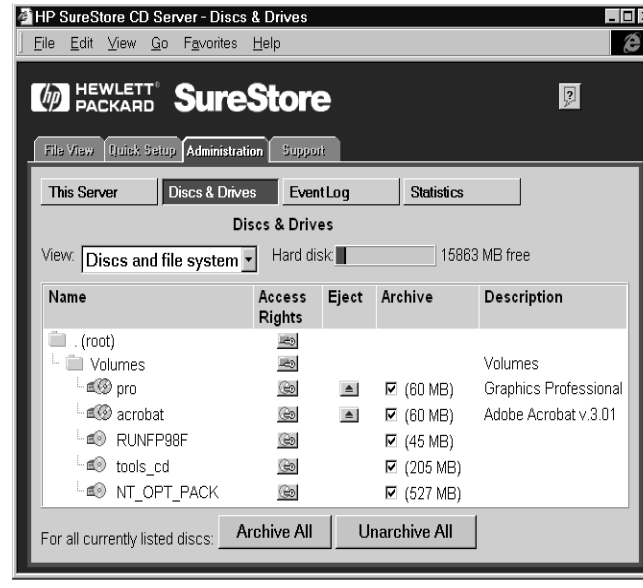
- Disable all protocols not being used. If unused protocols are not disabled, a user accessing the server through such a protocol may be given full access rights, regardless of the security configurations in other protocols. See "Disabling Access for Other Protocols" on page 3-13.
- Restrict access to the root and `System` folders (see below).

By Discs or Drives

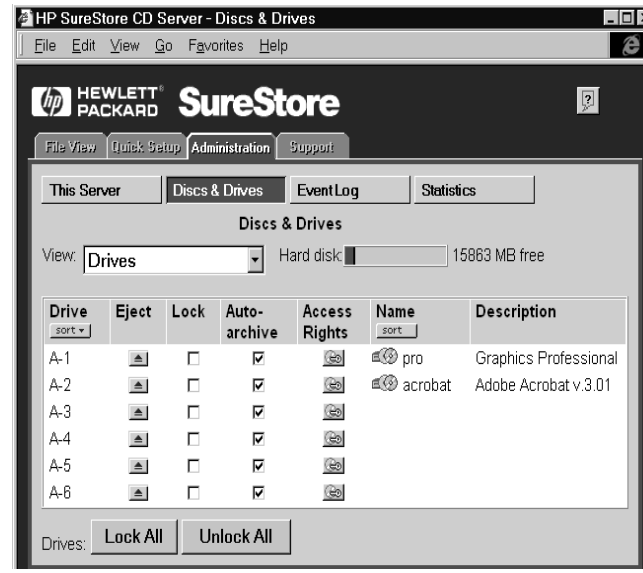
Access restrictions can be set individually for each CD/DVD-ROM drive, for each disc inserted into the drives, and for the server configuration files (in the `System` folder within the root), and for the volumes as a group (using the `Volumes` folder). Refer to the "File System Description" starting on page 7-3 for information on these folders.

Set these access rights using the web browser, under the Administration tab. Select the Discs and Drives button. In the Discs and file system view, you will see an icon in the Access Rights column for each of the discs and for the root and for the `volumes` folder. In the Drives view, you will see an icon in the Access Rights column for each CD/DVD-ROM drive. See the display on the next page.

Click on the Access Rights icon to display the Access Rights properties page for that access point.



By Drive. To associate the access sharing and access rights with the drive, for whatever disc is in the drive, rather than the specific disc, click Drive for Use the access rights and properties of the Drive.



Then the disc's volume name (see page 3-16) will be changed to the default SCSI name, such as CD-id2lun0. You can change this name using the Name field on this property page. As a result, the icon in the Access Rights column will illustrate the key on top of a drive rather than a disc. (For HP J4150A: If this disc is then archived, the share name will revert to the disc's volume name.)

Volume Name and User Limit. Under the General tab, you can set the disc's volume name and the limit for the number of users simultaneously accessing the volume (for user-license restrictions). The volume has by default the name held on the disc itself. You can override the default name using the Name setting on this page.

Note

- Spaces in a volume name will be replaced by underscores. If the volume name duplicates another volume name, an underscore and capital-A (then underscore and capital-B, etc.) will be appended to the duplicate.

Password. Under the Web security tab, you can protect the volume using either the administrator's Server Password (see page 3-13) or a separate password for the volume. These changes take effect as soon as you OK each page.

Security by Network. If you use Windows NT domains or NetWare NDS, you also can set up access restrictions for those environments. For the details, see page 4-14 or page 5-10, respectively.

Setup for Microsoft Networks (SMB)

This chapter describes the setup for Microsoft and IBM networks running SMB (Server Message Block). SMB is a protocol that makes use of NetBIOS. NetBIOS can be transported over different network protocols. The HP SureStore CD/DVD-ROM server supports the following transport methods automatically:

- SMB over NetBIOS/NetBEUI
  (NetBIOS Extended User Interface)
- SMB over NetBIOS/TCP/IP
  (also called NBT)

Clients using SMB could be running Windows 95 or 98, Windows NT, Windows for Workgroups, OS/2, UNIX, or DOS. This chapter includes examples of procedures for such client systems. You may need to refer to your network operating system manuals for assistance with specific procedures.

If you are running TCP/IP on your network as well as SMB, refer to chapter 3 to assign the IP address to the server (the “Set the IP Address for the Server” section from page 3-1 to page 3-8) before granting access to clients.

> Following that section of chapter 3 are instructions for setting up access to the discs and configuring the server (starting on page 3-9). For IP and HTTP installations, we recommend use of those instructions for client access and configuration in addition to the methods following in this chapter.

Client Access to Discs

The procedures for accessing your HP CD/DVD-ROM server are similar to accessing any other workstation or file server. Users at workstations (clients) on the network use the same procedures to access both types of servers, For easy access to the discs from applications, the server should be made available to each client system—"mapped" to a drive letter on PC systems. After the server is mapped, the client accesses the server with its discs (and optionally its configuration parameters) just like any other attached disk drive or networked file server.

The mapping described in this section can be done on *one* workstation by one administrator or installer first. Then any configuration tasks for the server setup can be done (described later in "Configuring the Server" on page 4-11), before setting up *all* the network clients according to the procedures in this section.

1. Select Access Point

Different workstations need different points of access to the server. The network administrator or installer, for example, needs access to configure and monitor the server. Then, the administrator may want to set up all the clients with access to the discs, without access to the configuration files stored on the server. Choices for the latter setup include mapping all the discs in the server and mapping each drive or disc volume separately.

The procedures for mapping drives require you to select an access point. We recommend consulting the description of access points and the server's file system, in the reference chapter starting on page 7-1, before proceeding.

2. Map Drives

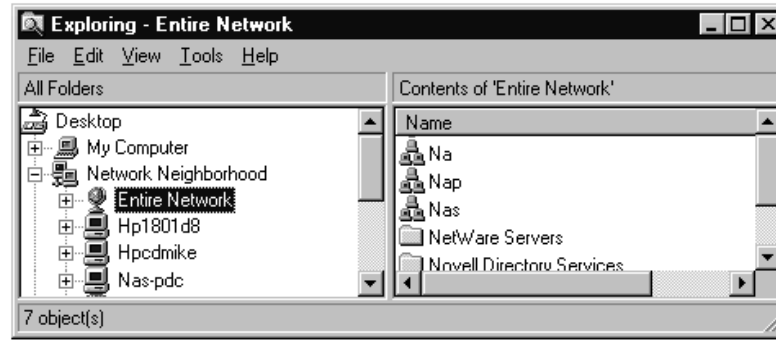
This section gives you examples of how to set up access to the server from clients for Windows 95/98, Windows NT, Windows for Workgroups, OS/2, and DOS.

Note

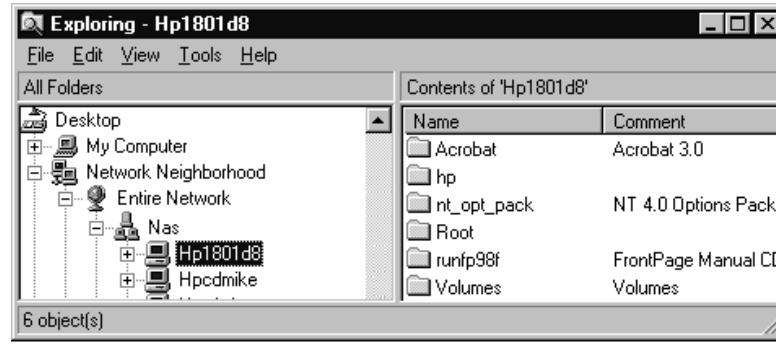
- The examples below assume that you have not changed the server name for SMB: `HP` *hhhhhh*, where *hhhhhh* are the last six digits of the server's LAN hardware (MAC) address. If you have changed the server name (see page 4-12), that assigned name appears instead.

Windows 95, 98, Windows NT 4.0

1. Start the Windows Explorer from the Start Programs Menu.
2. Expand the Network Neighborhood icon. The available resources are displayed.



3. Expand the Entire Network icon to list the workgroups. The server will appear in the (alphabetically) first workgroup on your local segment.



Skip ahead to step 11 if you see the server. However, if you cannot find a workgroup containing the server name in Network Neighborhood, then continue here with step 4:

4. Start the Windows Explorer from the Start menu.
5. Select Map Network Drive... from the Tools menu.
6. Select a drive letter.

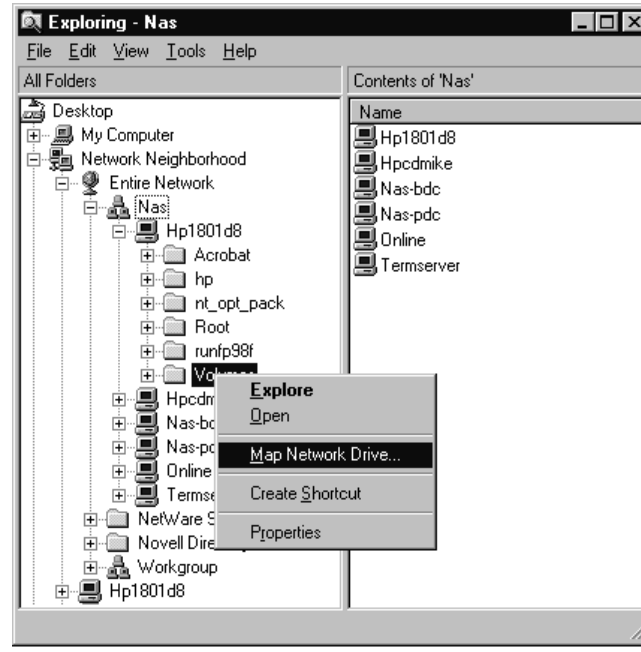
7. In the path box, type `\\HP hhhhhh\root`, where *hhhhhh* are the last six digits of the server's LAN hardware (MAC) address.
8. This maps the administrative root access to the server. If you wish to use this root access for the same drive letter the next time you start your computer, check Reconnect at Logon. (If you wish to select a level of mapping more appropriate for a user, see step 10 below.)
9. Click the OK button. The server is now ready for use.
10. *Optional:* If you have other SMB domains or workgroup names defined and the server did not appear within them, you can use this client to change the setting for the Workgroup Name to the name of your existing domain or workgroup. (See page 4-12.)c

    If you wish to map the server to a different level than root level (as described in step 12 below), you can then return to step 1 of the procedure above to redo the mapping as desired.
11. Double-click the entry for your new server. The default entry name is `HP hhhhhh`, where *hhhhhh* are the last six digits of the server's LAN hardware (MAC) address.

Note

- The individual discs are shown as well as the `Volumes` folder that contains them. This is not the normal hierarchical appearance, but it is done this way to give you the choice of mapping either individual discs or all of them together.

12. To map a resource to a drive letter, right-click one of the following server resources:
    - For root access to everything, right-click `Root`.
    - For access to all discs with one drive letter, right-click the `Volumes` folder.
    - For individual disc access, right-click the specific disc folder name.
13. From the pop-up menu, select Map Network Drive.



14. Select a drive letter for your server or use the default drive letter.
15. Check Reconnect at Logon if you wish to use the server resource as the same drive letter the next time you start your computer.
16. Click the OK button. The server is ready for use.

Note ❑ In the Microsoft network environment, network resources are accessed by specifying a server and a resource on that server using the Universal Name Convention (UNC) as:

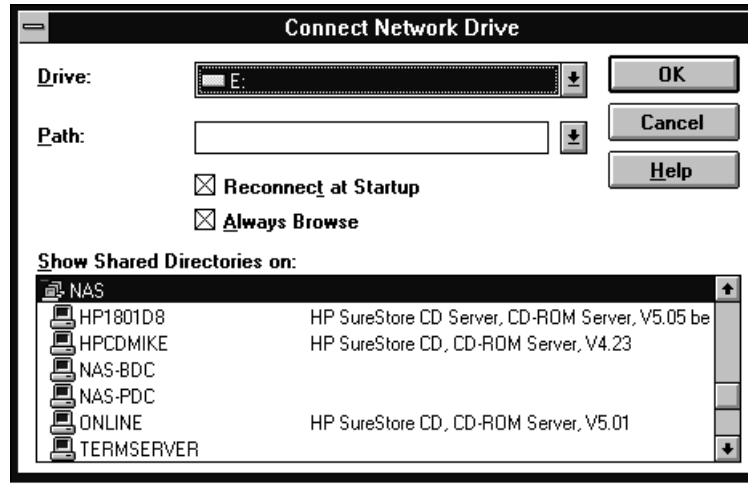
```
\\server\resource
```

The resource is *not* a file path. You may not replace the resource name with the path to a file or folder on your disc. Therefore, if using the file system as outlined in the "File System Description" on page 7-3, only `Volumes` folder access would be possible (see "Access Points" on page 7-1). However, the server also allows you to map the following resources on SMB clients:

- Root, which includes the complete file system of the server. Map a network drive to `Root` for root-level access.
- A folder for each disc (or for each CD/DVD-ROM *drive* if you have set the drive to "Use the access rights and properties of the Drive" rather than "Disc" as described on page 3-14). Map a network drive letter to the volume name (or to the drive name).

Windows for Workgroups

1. Start File Manager.
2. From the Disk menu, select Connect Network Drive. The following dialog is displayed.



3. Select a drive letter or accept the default.
4. In the Path field, type an entry for your server:

```
\\HP hhhhhh\<path>
```

hhhhhh are the last six digits of your server's LAN hardware (MAC) address.

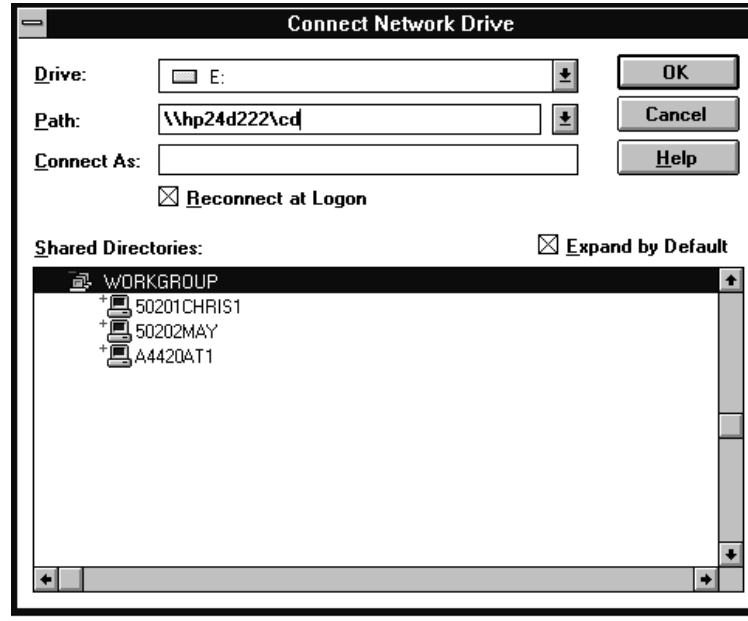
<path> is the path of the resource that provides your selected access point on the server.

- For root access to everything, type `root`
- For access to all discs with one drive letter, type `volumes`
- For individual disc access, type the specific volume name, for example, `50202MAY`

5. Check Reconnect at Startup if you wish to use the same mapping the next time you start your computer.
6. Click the OK button. The server is ready for use. The server appears in the (alphabetically) first workgroup on your local segment. Or, you can use this client to change the setting for the Workgroup Name to the name of your existing domain or workgroup. (See page 4-12.)

Windows NT 3.51

1. Start the File Manager.
2. From the Disk menu, select Connect Network Drive.



3. Select a drive letter or accept the default.
4. In the Path field, type an entry for your server:

```
\\HP hhhhhh\<path>
```

hhhhhh are the last six digits of your server's LAN hardware (MAC) address.

<path> is the path of the resource that provides your selected access point on the server.

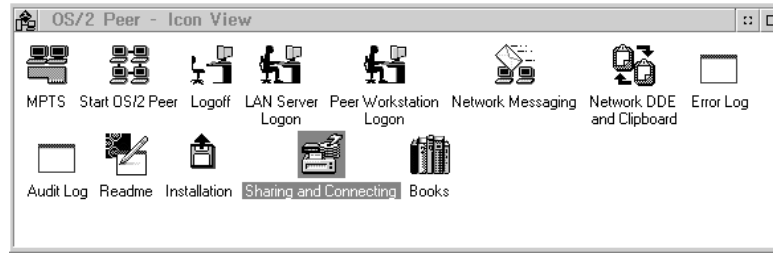
- For root access to everything, type `root`
- For access to all discs with one drive letter, type `volumes`
- For individual disc access, type the specific volume name, for example, `50202MAY`

5. Check Reconnect at Startup if you wish to use the same mapping the next time you start your computer.
6. Click the OK button. The server is ready for use.

IBM Peer for OS/2

Make sure you have the peer for OS/2 installed on the workstation. If not, do the procedure on page 4-9 instead of the procedure on this page.

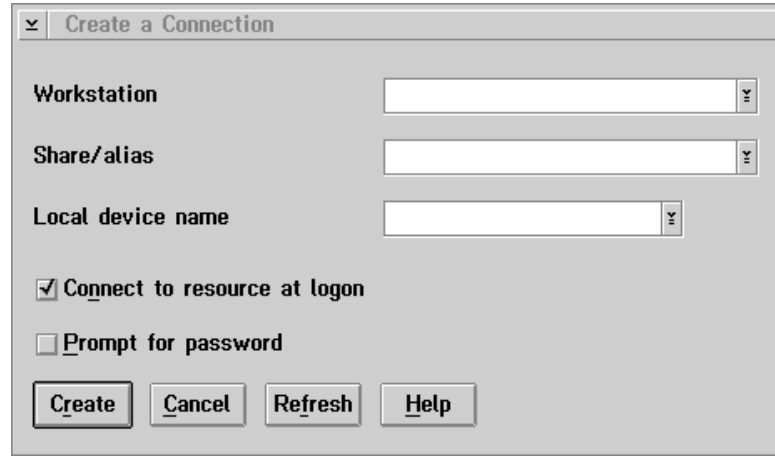
1. Double-click the OS/2 Peer icon. The Peer window opens:



2. Double-click the Sharing and Connecting icon to open the following window:

Active connections will be listed in the window.

3. From the Connection menu, select Create. The following dialog is shown:



4. In the Workstation field, enter `HP` *hhhhhh*, where *hhhhhh* are the last six digits of the server's LAN hardware address.
5. In the Share/alias field, enter the name of the server folder or an individual disc:
   - For root access to everything, type `root`
   - For access to all discs with one drive letter, type `volumes`
   - For individual disc access, type the specific volume name, for example, `cd_12345`
6. In the Local device name field, select a drive letter to map.
7. Click Create. The server is ready for use.

If you do not have IBM Peer for OS/2

The server can be mapped to a drive letter using the `net use` command, as follows:

1. Open an OS/2 window.
2. At the OS/2 prompt, enter:

```
net use <drive-letter>: \\HP hhhhhh\<path>
```

   hhhhhh are the last six digits of your server's LAN hardware (MAC) address.

   <path> is any server folder.

3. To make the connections active each time you boot up, create or edit the `startup.cmd` file to include the `net use` command.

DOS The server is mounted using the `net use` command, provided that the appropriate network support is installed.

1. At the DOS prompt, enter the following:

```
net use <drive-letter>: \\HP hhhhhh\<path>
```

hhhhhh are the last six digits of the server's LAN hardware (MAC) address. In the examples below, the example full LAN hardware address used is 0060B0CD000B.

<path> is the path of the folder that provides your selected access point on the server.

Example of root access:

```
net use E: \\HP cd000b\root
```

Example of `volumes` folder access:

```
net use F: \\HP cd000b\volumes
```

Example of disc access:

```
net use G: \\HP cd000b\cd_12345
```

2. To make the connection permanent, edit your `autoexec.bat` file to include your `net use` command.

Notes

- If you are using DOS within Windows 95/98 or Windows NT 4.0, and you wish to access file or directory names longer than 8 characters, you will need to precede these long names with a quote mark (").

  An example of changing to the directory named Product Information:

```
G:\HP cd000b\CD\>cd "PRODUCT INFORMATION
```

- If you are using DOS within Windows NT, you may use the * wildcard.

  An example of quickly changing to that directory:

```
G:\HP cd000b\CD\>cd "PRODUCT*
```

Configuring the Server

By making configuration changes, you can customize server operation and can set access rights for security.

Configuration Tips

Some server configuration changes you might need:

- Set up a password for the server.
- Set up the server name.
- Disable access to the server using protocols other than SMB.
- Set up disc access rights using share-level security, or using user-level security with NT domain authentication.

Methods for Configuration

This chapter provides information for some of the configuration options, if they are general needs or relate specifically to SMB networks. If you are also using TCP/IP on your network, see chapter 3 for additional features. If you are also using Novell NetWare, see chapter 5.

HP recommends the web method of configuration. A browser and the server's web pages can be used for configuration, as long as HTTP is available. This is an easy way to make changes to the configuration and access files stored on the server. See "Web Browser Configuration" on page 3-12 for an introduction.

Text Editing is an alternative method. If you don't have IP, HTTP, and a web browser, you can use a text editor to directly edit and save the configuration file stored on the server. Precision in editing the files is required. See page 3-6 for details.

Disabling Access for Other Protocols

In the Detailed View (from the Quick Setup page), you can switch off all access to the server through other protocols for which you do not set up access restrictions.

You can disable NetWare access under the NetWare tab by using the Enable NetWare setting. You can disable UNIX access under the UNIX tab using the Enable NFS setting.

Note

❑ To continue administering the server using the web browser, *do not disable* HTTP access under the Web (HTTP) tab.

If you should ever need to disable Microsoft Windows SMB access, disable the NetBIOS Protocol Bindings for both NetBEUI and TCP/IP under the Windows (SMB) tab.

You must restart the server to effect these Detailed View settings.

How and Where Server Appears

On the Quick Setup web page, you can select the wizard for Windows (SMB) to configure the following. (Clicking the wizard's Finish button causes the server to restart for the settings to take effect.)

To change the server name to text that is easy for your clients to identify, set the SMB Server Name for the Windows (SMB) network environment. The default is `HP` *hhhhhh*, where *hhhhhh* are the last 6 digits of the server's LAN hardware (MAC) address. Characters that Microsoft does not allow in the name are:

SPACE , : ; ? " * \ | [ ] < > ^ + =

So that the server will appear in your existing SMB domains or workgroups, change the Workgroup name. Characters that Microsoft does not allow in the name are the same as above.

Access Rights: Windows Security

By default, all users have access to all the discs on all the drives on the server, and the system files are protected by the server password. You can restrict user access to drives, to individual discs, and to the server configuration. Specific passwords can be configured for SMB user-level or share-level access control. You can limit the number of users simultaneously accessing any disc to comply with user-license restrictions. And we recommend that you restrict access to the root and `System` folders on the server.

Access restrictions are set individually for each protocol. If you use other network protocols in addition to SMB, consult the other chapters for setup of those protocols. The default settings in some protocols provide full access rights to all users, so we recommend that you disable all protocols not being used. If you do not, a user accessing the server through such a protocol may be given full access rights, regardless of the security configurations in other protocols.) See "Disabling Access for Other Protocols" on page 4-11.

Server Password

If HTTP (providing web access) remains enabled, it is important that you change the server password to protect the system files. For example, users are prompted for the server password when trying to access the Administration and Quick Setup web pages for the first time during a session. Under the Administration tab, click the This Server button and with the server module highlighted, click the Settings button. On the resulting page, select the General tab. Change and confirm the password. Click Save. This new password takes effect without restarting the server.

User Limits

Use the Administration tab. Select the Discs and Drives button. Select the Discs and file system view. For each of the discs and for the root and for the `volumes` folder, you will see an icon in the Access Rights column. Click on that icon. An Access Rights properties page will be displayed.

Under the General tab, you can set the disc's volume name and the limit for the number of users simultaneously accessing the volume (for user-license restrictions). The volume has by default the name held on the disc itself. You can override the default name using the Name setting on this page.

Note

- Spaces in a volume name will be replaced by underscores. If the volume name duplicates another volume name, an underscore and capital-A (then underscore and capital-B, etc.) will be appended to the duplicate.

Share-Level Access Control

A password can be assigned to any server folder or any disc inserted in a connected drive. The user will automatically be prompted for the password when trying to access the shared folder. Access will then be granted to the folder and all its subfolders. To set this security mode, use the Quick Setup tab and select either the Wizard or the Detailed View for Windows (SMB). Select Share level.

Setting the Passwords. Then using the Administration tab, select the Discs and Drives button. Select the Discs and file system view. For each of the discs and for the root and for the `volumes` folder, you will see an icon in the Access Rights column. Click on that icon to display an Access Rights properties page. Select the Windows Sharing tab. The Windows share name for the volume can be specified on this page, and it becomes the volume name (same as Name under the General tab. Set the share level and passwords for access here.

Controlling Access by Drive. On the Access Rights property page, you can opt to associate the access rights by drive, for whatever disc in is the drive. Click "Drive" for "Use the access rights and properties of". Then the disc's volume name (see page 4-13) will be changed to the default SCSI name, such as CD-id2lun0. You can change this name using the Name field on this property page. As a result, the icon in the Access Rights column will illustrate the key on top of a drive rather than a disc. (For HP J4150A: If this disc is then archived, the share name reverts to the disc's volume name.)

User-Level Access Control

You can implement user-level security authenticated by an NT domain controller. A user logging in to the server must provide her identity (name and domain) and password. The server uses this information to validate the user identity against the primary domain controller (PDC). It actually logs in to the PDC, reads the user's group membership, and then logs out. If its login is successful, the user is allowed access to the server.

For SMB, the server maintains an administrator account that is never authenticated against the primary domain controller, because some method of access must be maintained in case the PDC becomes unavailable.

To set this access control mode, use the Quick Setup tab and select either the Wizard or the Detailed View for Windows (SMB). On the properties page, select User level. Then specify the Authentication Domain containing the controller.

Setting the Passwords. Then using the Administration tab, select the Discs and Drives button. Select the Discs and file system view. For each of the discs and for the root and for the `volumes` folder, you will see an icon in the Access Rights column. Click on that icon to display an Access Rights properties page. Select the Windows Sharing tab. The Windows share name for the volume can be specified on this page, and it becomes the volume name (same as Name under the General tab. Set the rights and passwords for access here.

Controlling Access by Drive. On the Access Rights property page, you can opt to associate the access rights by drive, for whatever disc in is the drive. Click “Drive” for “Use the access rights and properties of”. Then the disc’s volume name (see page 4-13) will be changed to the default SCSI name, such as CD-id2lun0. You can change this name using the Name field on this property page. As a result, the icon in the Access Rights column will illustrate the key on top of a drive rather than a disc. (For HP J4150A: If this disc is then archived, the share name reverts to the disc’s volume name.)

Setup for Novell Networks

This chapter describes the setup for Novell networks running NCP (NetWare Control Protocol). The Novell network products could be NetWare 3.x, 4.x, or 5.

Note: NetWare 5 with IP

- The HP SureStore CD/DVD-ROM server supports NCP transported over IPX and/or NetWare/IP. However, the server *does not* support NetWare 5's pure IP implementation; it supports NetWare/IP from NetWare 4.11. This is used by NetWare 5 in compatibility mode.

Clients using NCP could be running Windows 95 or 98, Windows NT, Windows for Workgroups, OS/2, or DOS. This chapter includes examples of procedures for many such installations. You may need to refer to your network operating system manuals for assistance with specific procedures for some client systems.

If you are running TCP/IP on your network as well as Novell products, refer to chapter 3 to assign the IP address to the server (the "Set the IP Address for the Server" section from page 3-1 to page 3-8) before granting access to clients.

Following that section of chapter 3 are instructions for accessing the discs and configuring the server by using a web browser. For IP and HTTP installations, we recommend use of those instructions for client access and configuration in addition to the methods following in this chapter.

Client Access to Discs

The procedures for accessing your HP CD/DVD-ROM server are similar to accessing any other NetWare file server. Users at workstations (clients) on the network use the same procedures to access both types of servers, For easy access to the discs from applications, the server should be made available to each client system—"mapped" to a drive letter on PC systems. After the server is mapped, the client accesses the server, with its discs (and optionally its configuration parameters) just like any other attached disk drive or networked file server.

The mapping described in this section can be done on *one* workstation by one administrator or installer first. Then any configuration tasks for the server setup can be done (described later in "Configuring the Server" on page 5-9), before setting up *all* the network clients according to the procedures in this section.

1. Select Access Point

Different workstations need different points of access to the server. The network administrator or installer, for example, needs access to configure and monitor the server. Then, the administrator may want to set up all the clients with access to the discs, bypassing the configuration files stored on the server. Choices for the latter setup include mapping all the discs in the server and mapping each drive or disc volume separately.

The procedures for mapping drives require you to select an access point. We recommend using the description of access points and the server's file system, in the reference chapter starting on page 7-1, before proceeding.

2. Map Drives

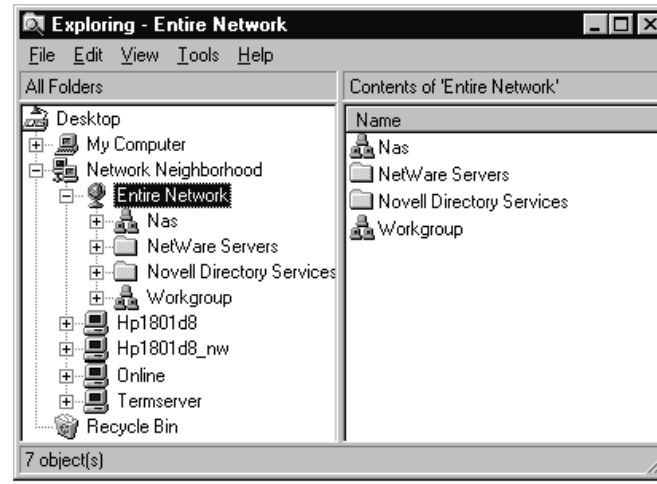
The examples in this section are for Microsoft client software on Windows 95/98, Windows NT, Windows for Workgroups, and DOS. For use of Client 32, you may need to make substitutions in these procedures.

Note

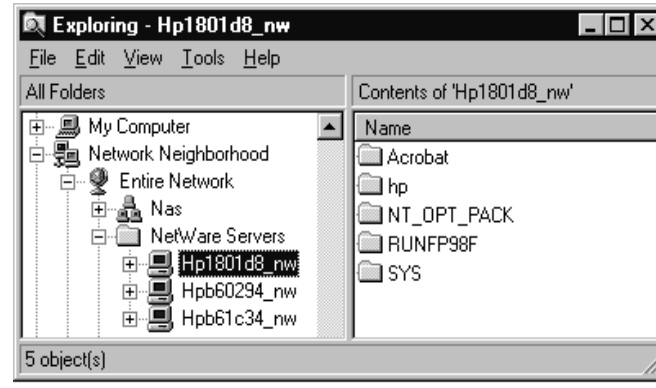
- The examples below assume that you have not changed the server name for NetWare: `HP` *`hhhhhh`*`_NW`, where *`hhhhhh`* are the last six digits of the server's LAN hardware (MAC) address. Your server name will be different if you have changed the server name (see page 5-10) or if you are using NetWare/IP.

Windows 95/98 and Windows NT 4.0

1. Start the Windows Explorer from the Start Programs Menu.
2. Expand the Network Neighborhood icon. The available resources are displayed.



3. Expand the Entire Network icon and open the NetWare networking folder.



Skip ahead to step 10 if you see the server. However, if you cannot find the server name in NetWare, then continue here with step 4:

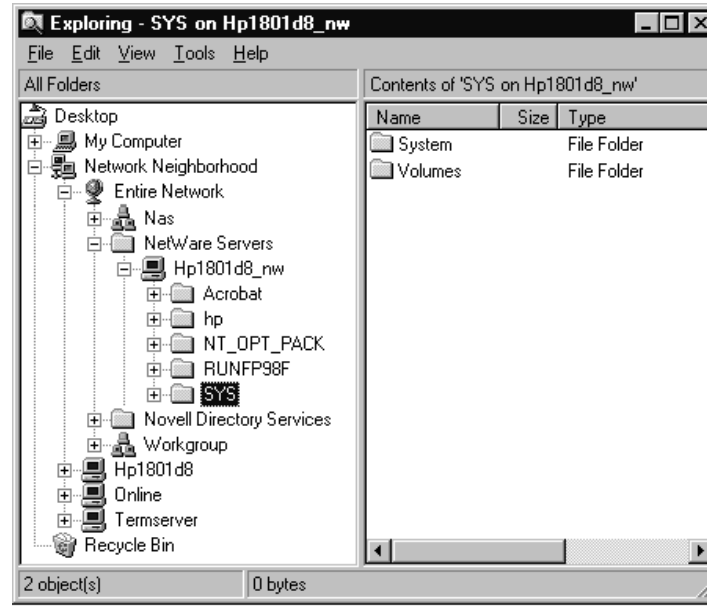
4. Start the Windows Explorer from the Start menu.
5. Select Map Network Drive... from the Tools menu.
6. Select a drive letter.

7. In the path box, type `\\HP hhhhhh_NW\SYS`, where *hhhhhh* are the last six digits of the server's LAN hardware (MAC) address.
8. This maps the administrative root access to the server. If you wish to use this root access for the same drive letter the next time you start your computer, check Reconnect at Logon. (If you wish to select another level of mapping, see step 12 below.)
9. Click the OK button. The server is now ready for use.
10. Double-click the entry for your new server. The default entry name is `HP hhhhhh_NW`, where *hhhhhh* are the last six digits of the server's LAN hardware (MAC) address. The name can be changed later during configuration.

Note

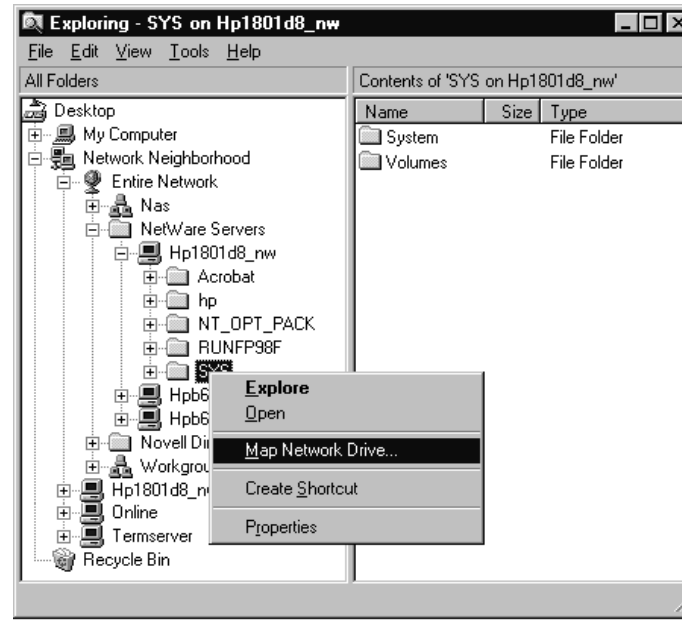
- On some clients, if you have set Bindery Authentication, you will be prompted to enter your user name and password, unless you are already logged in. (Before the server has been set up, all users have full access to it.)

11. Once you are logged in to the server, you should see the available discs by their volume names, as well as the `sys` folder. Expand `sys` to see the `volumes` folder (which also contains all the volumes).



12. To map the server to a drive letter, right-click one of the following server resources:
    - For root access to everything, right-click the `sys` folder.
    - For access to all discs with one drive letter, right-click the `volumes` folder.
    - For individual disc access, right-click the specific disc volume folder.

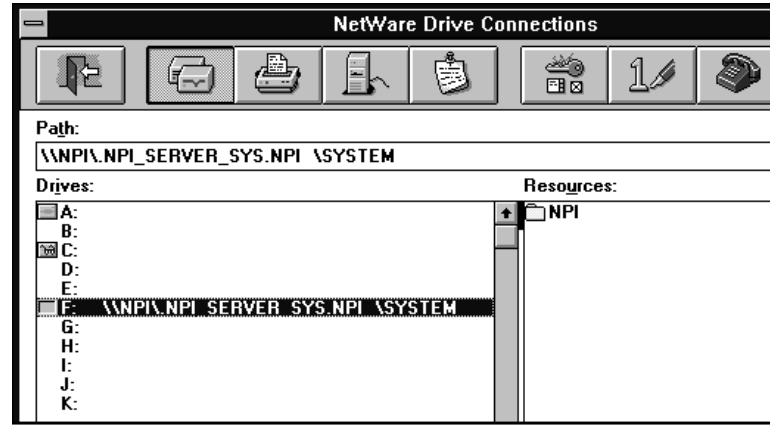
    If you do not wish to map the server to a drive letter, just continue to explore the server until the file you need is found.
13. From the pop-up menu, select Map Network Drive...



14. Select a drive letter for your server.
15. Check Reconnect at Logon if you wish to use the server resource as the same drive letter the next time you start your computer.
16. Click the OK button. The server is ready for use.

Windows for Workgroups

1. Start File Manager.
2. From the Disk menu, select Connect Network Drive…
   The following dialog is displayed. If you also have Microsoft Network installed, you may have to click the NetWare button to display the dialog.

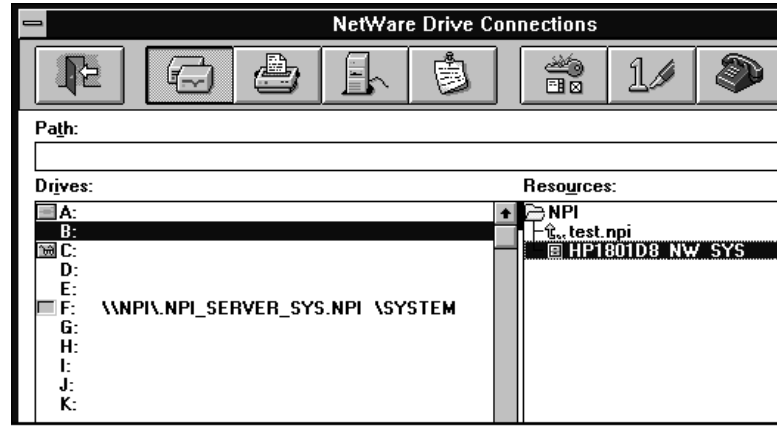


3. Click the Select NetWare Connection button on the toolbar.
4. Select the entry for your new server. The default entry name is `HP` *hhhhhh*`_NW`, where *hhhhhh* are the last six digits of the server's LAN hardware (MAC) address. The name can be changed later during configuration.
5. Click the Login button.

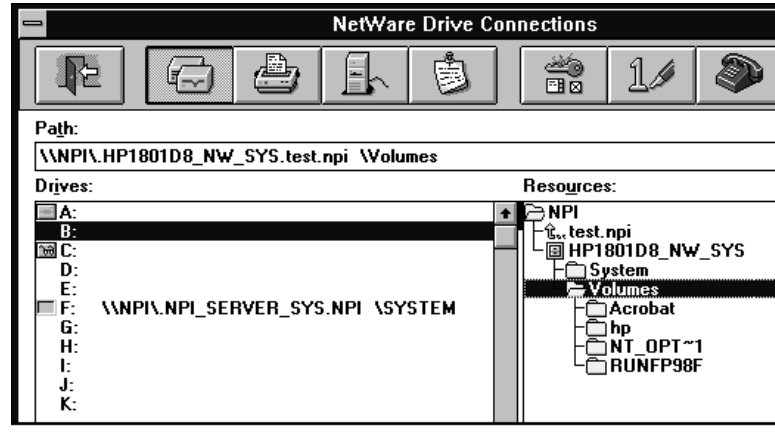
Note

- On some clients, if you have set Bindery Authentication, you will be prompted to enter your user name and password, unless you are already logged in. (Before the server has been set up, all users have full access to it.)

6. Once you are logged in to the server, click the Drive Connections button on the toolbar. The following dialog is displayed.



7. Double-click the volume name (`HP 1801D8_NW_SYS` in this case). Then double-click the `Volumes` folder to display the following dialog.



8. Select a drive letter in the Drives listing and then:
   - For root access to everything, select HP *hhhhhh*_NW_SYS in the Resources list.
   - For access to all discs with one drive letter, select the VOLUMES folder in the Resources list.
   - For individual disc access, select the specific disc folder name (inside the volumes folder) in the Resources list.

     If you are using bindery mode, the discs will appear at the same level as the SYS volume.
9. Click Map to map the server to the selected drive letter.
10. Click Permanent if you wish to use the server as the same drive letter the next time you start your computer.
11. Click the Exit button on the toolbar. The server is ready for use.

DOS The server is mounted using the map command.

1. On a NetWare file server, at the DOS prompt enter the following:

```
map root <drive-letter>:=HP hhhhhh_NW/<path>
```

   hhhhhh are the last six digits of your server's LAN hardware (MAC) address. In the examples below, the full LAN hardware address assumed is 0060B0CD000B.

   <path> is the path of the folder that provides your selected access point on the server.

   Example of root access:

```
map root E:=HP cd000b_NW/SYS:
```

   Example of VOLUMES folder access:

```
map root F:=HP cd000b_NW/SYS:/VOLUMES
```

   Example of disc volume access:

```
map root G:=HP cd000b_NW/SYS:/VOLUMES/cd_18881
```

2. To make the connection permanent, edit your autoexec.bat file to include your map command.

Login Scripts Alternative

As an alternative to setting up clients individually as described above, login scripts can be used to automate and distribute access to the discs. To map the networked discs, the `attach/map` (in NetWare 3.x) or `login/map` (in NetWare 4.x) commands are normally used.

Configuring the Server

By making configuration changes, you can customize server operation and set access rights for security.

Configuration Tips

The following Novell environments require some configuration of the server itself before setting up the client access. The configuration is included in this section.

- Novell NetWare 4.x and 5 NDS (Novell Directory) Server
- Novell NetWare/IP in NetWare 4.x, and in NetWare 5 only in compatibility mode.

Note

❑ You cannot use this server with NetWare 5 in its pure IP implementation.

The following Novell environment allows some access configuration options to be configured either before or after giving access to all the clients.

- NetWare 3.x bindery server networks

Other server configuration changes that Novell network may need:

- Disable access using protocols other than NetWare.
- Set up or change the server name for Novell clients.
- Set up a password to be used with the bindery server.
- Set the server's time synchronization.
- Show all volumes.

Methods for Configuration

This chapter provides information for some of the configuration options, if they are general needs or relate specifically to Novell networks. If you are also using TCP/IP on your network, see chapter 3 for additional features.

HP recommends the web method of configuration if a web browser and IP and HTTP are available. Text editing is an alternative method (see page 3-6).

Disabling Access for Other Protocols

In the Detailed View (from the Quick Setup page), you can switch off all access to the server through other protocols for which you do not set up access restrictions.

You can disable Microsoft networking (SMB) access by using the Windows (SMB) tab and disabling the NetBIOS Protocol Bindings for both NetBEUI and TCP/IP. You can disable UNIX access under the UNIX tab using the Enable NFS setting.

Note

- Do *not* disable Web (HTTP) access. Maintain administrative access to the server using this web interface.

If you should ever need to disable NetWare access to the server, use the NetWare tab and the Enable NetWare setting.

You must restart the server to effect Detailed View settings.

Server Name

On the Quick Setup web page, you can select the wizard for NetWare (NCP) to change the NetWare Server Name. The default is `HP` *`hhhhhh`*`_NW`, where *`hhhhhh`* are the last six digits of the server's LAN hardware (MAC) address. (Clicking the wizard's Finish button causes the server to restart for the settings to take effect.)

NDS Server

If the server is used as an NDS-compatible server, you may store the access rights in the NDS tree, or you may store the access rights in a file on a Novell file server. HP recommends the first option, storing them in the tree.

If this is the first HP SureStore CD-ROM or CD/DVD-ROM server being installed in your NDS tree, the server will try to extend the NDS Schema with a new attribute to the "NCP server" class. This new attribute will not affect the operation of your NetWare servers. This schema extension has been approved by Novell.

For this first server, you must use the account of the Admin object that has supervisor rights to the *root* object of the NDS tree. This means that the account specified in the NDS setup (see page 5-11) must have supervisor access rights to that root object.

Once this first server has been successfully installed, the schema is extended. In future installations of other HP CD-ROM or CD/DVD-ROM servers into this tree, as well as any re-installation of this server, you can use the account of the Admin object for the tree in which the server will reside.

After you set up your own access to the server from a workstation on the network using the instructions in the previous section, "Client Access to Discs" starting on page 5-2, you can configure the server.

Use the Wizard on the Quick Setup page. Select NetWare (NCP). Select NDS. Settings you will need are:

- NDS Tree name. Example: `NPSD`
- Account with Supervisor rights. Use the Browse button to select the account—as the relative distinguished name of a user or administrator (with Supervisor rights to the root for the first installation and later with Supervisor or Create rights in the NDS tree context. Example: `ADMIN.OU.NPSD.HP`
- Password for the account set (see previous item).
- NDS Tree Context. Example: `OU.NPSD.HP`

Clicking the wizard's Finish button causes the server to restart for the settings to take effect. Several minutes afterward, the server should be installed in the NDS tree, and users will be able to access the server using NDS mode.

Next, use NetWare Administrator (*NWADMIN)* to set up the access right on the `sys` volume of the server.

You must log out and then log in again to have all the necessary rights on the server object and the associated volume.

Verify proper installation by running NetWare Administrator (*NWADMIN)*. The server should appear as a NetWare NDS File server. Examine the properties in *NWADMIN*. The server status should be "UP".

If the server does not appear in the NDS tree, or if it appears but the status is down or unknown, check for error messages in the server's log file. Refer to "NetWare NDS Installation Errors" on page 10-13 for corrective action for each error message.

We recommend that you disable bindery mode (using the Bindery selection that immediately precedes the NDS selection on the second page of the NetWare wizard), after you have successfully installed the server in NDS, and allow users to log on in NDS mode only.

Note

- ❑ If NDS mode is not functioning, you can always access the server in bindery mode by logging in as supervisor using the password on the server, even if bindery mode is disabled.

Store NDS Rights in File

First identify or create a directory on an existing Novell file server to contain the NDS access rights file.

After you set up your own access to the server from a workstation on the network using the instructions in the previous section, "Client Access to Discs" starting on page 5-2, you can configure the server.

Use the Detailed View on the Quick Setup page. Select NetWare (NCP). For "Store NDS Rights in", select File. Specify the file on the NetWare file server to store the NDS access rights. The directory must exist; the HP CD/DVD-ROM server will create the file when rights are first changed on the server's `sys` volume. You must restart the server for these settings to take effect.

Then assign the server NDS object (newly created by the above procedure) as a trustee to the directory for the access rights file. The rights to assign are Read, Write, Create, Erase, Modify, and FileScan.

Then you may change any rights on the server's `sys` volume, using NetWare Administrator (*NWADMIN)*. If you do so, the server will create the access rights file you defined on the other Novell file server.

You must log out and then log in again to have all the necessary rights on the server object and the associated volume.

Verify proper installation by running *NWADMIN*. The server should appear as a NetWare NDS File server. Examine the properties in *NWADMIN*. The server status should be "UP".

> If the server does not appear in the NDS tree, or if it appears but the status is down or unknown, check for error messages in the server's log file. Refer to "NetWare NDS Installation Errors" on page 10-13 for corrective action for each error message.

We recommend that you disable bindery mode (using the Bindery selection that immediately precedes the NDS selection on the second page of the NetWare wizard), after you have successfully installed the server in NDS, and allow users to log on in NDS mode only.

Note

- If NDS mode is not functioning, you can always access the server in bindery mode by logging in as supervisor using the password on the server, even if bindery mode is disabled.

Default Settings in NetWare NDS

After installing the server as an NDS server, the default security rights will protect all the configuration files. The `System` folder will be empty for users. The user rights to the server and its files and directories are set up as follows:

- Supervisor rights to the `sys` volume are inherited from the Supervisor rights to the NDS server object.
- Read and File Scan rights are inherited from the Browse rights to the NDS server object.
- By default, the `System` directory is set up with an inherited-rights filter that filters all rights except the Supervisor right. This protects all the configuration files.

Because the server appears as a normal NDS file server, its NDS security rights can be set using standard procedures.

The server's file system security rights are set up by the NetWare Administrator, as detailed below:

1. Login as Admin, and start the NetWare Administrator.
2. Browse the `sys` volume by double-clicking it. You will see all the directories available in the server.
3. Select the directory or file for which you wish to set the access rights to, and *right-click* it.
4. Choose Details, and make the required changes.

The NetWare NDS access rights for the server can be set using Security Equivalence, Group, Container, Organization role, and User Objects as with any other NDS file server. There is no difference between how you use *NWADMIN* to set these access rights for the HP CD/DVD-ROM server, and how you would set the access rights on an NDS file server.

Bindery Server

The HP SureStore CD/DVD-ROM Server acts as a normal NetWare file server; you use the standard tools such as *NWADMIN, SYSCON,* and *Filer* for handling security. Two bindery modes are described below—with user authentication and without user authentication.

With Authentication

If user access control is desired, you must specify an authentication server to the CD/DVD-ROM server. The server must log into the authentication server briefly to authenticate the user and identify the groups the user belongs to. In this case, the authentication server must have a standby license for the server, but several servers can share this license. If a license is not available, the user may still be authenticated but group information cannot be read.

Note

- ❑ All user accounts must allow two concurrent logins, not the Novell default of one login.

Authorized users have configurable rights to the volumes of the HP CD/DVD-ROM server. Authorization of users is done using an existing NetWare server, here referred to as the authentication server.

Use the Quick Setup web page and either the wizard or the Detailed View. Set Bindery mode and specify the authentication server for Bind Authentication.

The authentication process reduces Network Administrator overhead. The Administrator does not have to maintain a separate user database for HP CD/DVD-ROM servers. If the user is defined in the file server that the HP CD/DVD-ROM server uses for authentication, the Administrator will not have to do anything to give the user access to the HP CD/DVD-ROM server.

Authentication to a NetWare 3.x Server. For access to the HP CD/DVD-ROM server connected to a NetWare 3.x Server, authentication is validated through a user list in the bindery of the NetWare server:

- If the user is on the list, the user's password will be verified and the user will be granted access.
- If the password is incorrect, login will fail.
- If the user is not on the list, the user will not be granted access to the HP CD/DVD-ROM server. However, the user could log in as "guest" and get access to volumes that are not protected.

Default Access Rights. The default access rights in NetWare bindery mode are set up by the following trustee assignments:

- The root of the `sys` volume has `[EVERYONE]` as trustee, with File Scan, Read, Write, Create, Modify, and Erase rights.
- The `System` folder has all rights, except Supervisor, filtered. Thus all system files are effectively protected from normal user access.

Changing Access Rights. You can set the rights using standard tools, such as Filer.

- To make all volumes accessible to some users only, do the following:
  a. Log into your NetWare bindery file server as Supervisor.
  b. Attach to the HP SureStore CD/DVD-ROM server using its NetWare name (such as `HP` *`hhhhhh`*`_NW`, the user name `supervisor`, and the password specified as the Server Password. The factory-default password is `pass`.

     (In order for Filer to access the CD/DVD-ROM server, the client must have an active connection.)
  c. Start Filer on your NetWare bindery file server.
  d. Change the current directory to:

     `<HP -netware-name>``/sys:`

     where *`<HP -netware-name>`* is the HP SureStore CD/DVD-ROM server's NetWare name (by default `HP` *`hhhhhh`*`_NW`, where *`hhhhhh`* are the last six digits of your server's LAN hardware address).
  e. Remove the `[EVERYONE]` trustee from the root.
  f. Add a new trustee assignment to the root.
- To restrict access to a particular disc, do the following:
  a. Log into your NetWare bindery file server as Supervisor.
  b. Attach to the HP SureStore CD/DVD-ROM server using its NetWare name (such as `HP` *`hhhhhh`*`_NW`), and log into it using the user name `supervisor` and the password specified as the Server Password. The factory-default password is `pass`.

     (In order for Filer to access the CD/DVD-ROM server, the client must have an active connection.)

c. Start Filer on your NetWare bindery file server.

d. Change the current directory to:

   <HP -netware-name>/sys:

   where *<HP -netware-name>* is the HP SureStore CD/DVD-ROM server's NetWare name (by default HP *hhhhhh*_NW, where *hhhhhh* are the last six digits of your server's LAN hardware address).

e. On the resource you want to protect, set an inherited rights filter to filter ***all*** rights.

f. Add the new trustee assignment to the resource. This makes it available only to the users in the trustee list.

Notes

- The NetWare bindery access rights for the HP SureStore CD/DVD-ROM server can be set using Group and User Objects, as with any other file server.
- You can always access the HP SureStore CD/DVD-ROM server using the username supervisor and the password specified as the Server Password (by default pass).

With No Authentication

If user authentication is not required, you do not have to specify the an authentication server (Bind Authentication on the HP CD/DVD-ROM server). The Supervisor can log in using the Server Password. Other users can log in without password and will be considered to belong to the EVERYONE group.

An extra NetWare server license is not required because the server does not log into the file server.

Changing Access Rights. You can set the rights using standard tools, such as Filer, if you need to limit System file access to the Supervisor. Unauthorized users will still have guest access to the volumes.

Novell NetWare/IP

You can use the server in a NetWare environment that uses only the TCP/IP protocol with NetWare 4.11 (NetWare/IP). You *can not* use the server with NetWare 5 in its pure IP implementation. You can use it with NetWare 5 in compatibility (4.11) mode.

To use the IP protocol in NetWare, use Novell's documentation to make sure that the NetWare TCP/IP environment is fully implemented first.

Assign an IP address to the server; refer to "Set the IP Address for the Server" on page 3-1.

Configure the server for IP. Set the following to correspond with the IP address:

- Subnet Mask
- Default Router (gateway)
- Primary DNS Server
- Secondary DNS Server

Configure the server for NetWare. Set the following:

- Enable NetWare IP
- DSS Server

After the server is restarted and a delay of about 5 minutes, clients that support the NetWare/IP protocol will connect directly to the server peer-to-peer. Clients without NetWare/IP support will be routed through a Novell server with an IPX/IP gateway.

To Use NetWare/IP Only:

You can disable the IPX protocol on the server:

1. Enable NetWare.
2. Restart the server.
3. Set the Internal Net Address and the Server Name.
4. Restart the server again, and wait 5 minutes.

The server will then be accessible to the clients that support the NetWare/IP protocol.

Note

❑ If the clients cannot then access the server, then do the following:

a. Switch off the power to the server.

b. Wait 20 minutes for the SAP table to be flushed.

c. Switch on power to the server.

d. Wait 5 minutes for the server to be visible. All NetWare/IP clients should now be able to access the server.

Automatic Time Synchronization

Setting Up NDS Time Synchronization

If you are using NetWare NDS, you can set automatic time synchronization from a NetWare Time Server. On the Date and Time page, make sure the Time Zone is correctly set. Select Automatically and Novell Directory Services.

- NDS time synchronization is normally obtained using the SAP method.
- Alternatively, if you have a Time Provider Group on your system you can provide a list of servers for the server to contact to obtain its time synchronization. The list can also contain Secondary Time Servers. For this alternative, on the NetWare configuration page (select Quick Setup and Detailed View), select List of Servers under Time Source, and list the server names (separated by commas) to be contacted for time synchronization.

As an alternative to NDS Time Synchronization, you can use the Network Time Protocol (NTP, as defined by RFC 1769) if TCP/IP is running. (See page 3-13.)

Server Password

If HTTP (providing web access) remains enabled, it is important that you change the server password to protect the system files. Under the Administration tab, click the This Server button and with the server module highlighted, click the Settings button. On the resulting page, select the General tab. Change and confirm the password. Click Save. This new password takes effect without restarting the server.

Setup for UNIX Networks (NFS)

This chapter describes the setup for UNIX systems on networks using NFS (Network File System) transported over UDP/IP. Examples of procedures for UNIX systems are included. You may need to refer to your system manuals for assistance with specific procedures.

Use the instructions in chapter 3 to assign an IP address to the server (the "Set the IP Address for the Server" section from page 3-1 to page 3-8) before doing any of the procedures in this chapter.

Following that section of chapter 3 are instructions for accessing the discs and configuring the server by using a web browser (starting on page 3-9). For installations with IP and HTTP, we recommend use of those instructions for client access and configuration in addition to the methods following in this chapter 6.

Client Access to Discs

The procedures for accessing your HP SureStore CD/DVD-ROM server are similar to accessing any other workstation or file server. Users at workstations on the network use the same procedures to access both types of servers, For easy access to the discs from applications, the server should be "mounted" for each client system. After the server is mounted, the client accesses the server, with its discs (and optionally its configuration) just like any other attached disk drive or networked file server.

The mapping described in this section can be done on one workstation by one administrator or installer first. Then any configuration tasks for the server setup can be done (described later in "Configuring the Server" on page 6-3, before setting up all the network clients according to the procedures in this section.

Reference on Server File System

Different workstations need different points of access to the server. The network administrator or installer, for example, needs access to configure and monitor the server and to configure access rights. Then, the administrator may want to set up all the clients with access to the discs, bypassing the configuration files stored on the server. Please refer to the description of access points and the file system used on the server, in the reference chapter, starting on page 7-1.

Mount Drives

On UNIX systems, the server is accessed using NFS. Mount the server by using the following procedure:

Note

- ❑ You will need `root` privileges to mount the server.

1. Create a directory for the server:

```
mkdir <directory>
```

Example:

```
mkdir /HP cd
```

2. Mount the server:

```
mount <IP-address-or-hostname>:/ <directory>
```

<IP-address-or-hostname> is the IP address or host name assigned to the server for TCP/IP configuration; see “Set the IP Address for the Server” on page 3-1.

Example:

```
mount cdserv:/ /HP cd
```

NFS for PC or Apple Macintosh

The server can also be accessed through third-party NFS software for PC or Apple Macintosh computers. If you run a TCP/IP network, this provides an alternative to Microsoft networking (SMB). Please see the NFS software documentation for instructions on how to mount the server.

Configuring the Server

By making configuration changes, you can customize server operation and can set access rights for security.

Configuration Tips

Some server configuration changes you might need:

- Disable workstation access to the server using protocols other than NFS.
- Restrict user access.

Methods for Configuration

This chapter provides information for some of the configuration options, if they are general needs or relate specifically to UNIX networks. If you are also using TCP/IP on your network, see chapter 3 for additional features.

HP recommends the web method of configuration if a web browser and IP and HTTP are available. See "Web Browser Configuration" on page 3-12 for an introduction. Text editing is an alternative method.

Disabling Access for Other Protocols

In the Detailed View (from the Quick Setup page), you can switch off all access to the server through other protocols for which you do not set up access restrictions.

You can disable Microsoft networking (SMB) access by using the Windows (SMB) tab and disabling the NetBIOS Protocol Bindings for both NetBEUI and TCP/IP. You can disable NetWare access under the NetWare tab by using the Enable NetWare setting.

Note

- ❑ Do *not* disable Web (HTTP) access. Maintain administrative access to the server using this web interface.

If you should ever need to disable UNIX access to the server, use the UNIX tab and the Enable NFS setting.

You must restart the server to effect these Detailed View settings.

Access Rights

Access restrictions can be set individually for each protocol. If you use other network protocols in addition to NFS, consult the other chapters for setup of those protocols. (The default settings in some protocols provide full access rights to all users, so we recommend that you disable all protocols not being used, as described in the previous section. If you do not, a user accessing the server through such a protocol may be given full access rights, regardless of the security configurations in other protocols.)

UNIX/NFS-Specific Access Controls

You may restrict access by means of NFS to users with a certain Group IDs and User IDs (UID). You use standard UNIX commands or your platform-specific tools to set the rights for the mounted files.

Example using standard UNIX commands:

Using the example in step 2 of the mounting procedure on page 6-2, the local mount point is the `HP cd` directory.

```
chown root /HP cd/System
chgrp adm /HP cd/System
chmod 770 /HP cd/System
```

Result:

Now `root` (UID 0) and members of the group `adm` have full rights to the server's `System` folder, but no others.

Only the owner and the superuser can change these rights.

Differences from standard NFS servers. In the server's root file system (containing everything except the discs), you can set all rights and IDs for both directories and files. Uniquely, if a right is not set for a file or directory, the file or directory inherits the rights from the parent directory. Since no files can be created and there are no executable files, the data files will not inherit the executable bit of the directories. In the example above, all directories in the subtree `/HP cd/System/` have the rights `drwxrwx---` and all files will get the rights `-rw-rw----`.

For non-writable volumes such as inserted (and archived) discs, only the IDs and rights for the volume's root is changeable. All files and directories on that volume will get the same IDs and rights.

Example using standard UNIX commands:

```
chown cdowner /HP cd/Volumes/MyDisc
chgrp users /HP cd/Volumes/MyDisc
chmod 770 /HP cd/Volumes/MyDisc
```

Result:

All directories and files on the disc `MyDisc` have `cdowner` as owner and `users` as group. In this example, all directories and files have the rights `rwxrwx---`.

Authentication of a PC in an NFS Environment. PC workstations on a UNIX network can also be authenticated. This requires an authentication server and a Default User ID to be specified on the UNIX (NFS) configuration page under Quick Setup. The two settings are combined in 4 different ways, to obtain the following behavior.

Default User ID	PCNFSD Authentication Server	Result for PCNFSD clients
Example: `-2`	`0.0.0.0`	Clients with user ID and group ID = -2 can be authenticated, but there is no authentication server.
Example: `-2`	**Example:** `192.124.138.99`	Clients authenticated by the server get their real user ID and group ID. Clients not authenticated default to the Default User ID.
`0`	**Example:** `192.124.138.99`	Clients authenticated by the server get their real user ID and group ID. Clients not authenticated will fail.
`0`	`0.0.0.0`	All clients will fail.

Server Password

To protect the system files, it is important that you change the server password for web access. For example, users are prompted for the server password when trying to access the Administration and Quick Setup web page for the first time during a session. Under the Administration tab, click the This Server button and then the Settings button. On the resulting properties page, select the General tab. Change and confirm the password. Click Save. This new password takes effect without restarting the server.

Access by Discs or Drives

Access restrictions can be set individually for each CD/DVD-ROM drive, for each disc inserted into the drives, and for the server configuration files (in the `System` folder within the root), and for the volumes as a group (using the `Volumes` folder). Refer to the "File System Description" starting on page 7-3 for information on these folders.

Set these access rights using the web browser, under the Administration tab. Select the Discs and Drives button. In the Discs and file system view, you will see an icon in the Access Rights column for each of the discs and for the root and for the `volumes` folder. In the Drives view, you will see an icon in the Access Rights column for each CD/DVD-ROM drive.

Click on the Access Rights icon to display the Access Rights properties page for that access point.

By Drive. To associate the access sharing and access rights with the drive, for whatever disc is in the drive, rather than the specific disc, click Drive for Use the access rights and properties of the Drive.

> Then the disc's volume name will be changed to the default SCSI name, such as CD-id2lun0. You can change this name using the Name field on this property page. As a result, the icon in the Access Rights column will illustrate the key on top of a drive rather than a disc. (For HP J4150A: If this disc is then archived, the share name will revert to the disc's volume name.)

You must configure the UNIX Export List. Under the Unix Security tab, set up the export list for each folder or volume. To mount an individual disc, or drive, or the root, you must add an entry to the Add list for it.

These changes take effect as soon as you OK each page.

Setup Reference for All Networks

This chapter is a collection of reference information helpful for setting up the HP SureStore CD/DVD-ROM server. Information needed for specific network operating systems is contained in chapters 3, 4, 5, and 6. Hardware installation procedures are in chapter 2. Topics in this chapter include:

- Understanding the server's file system . . . . . page 7-3
  Consult this section, especially when you first use an HP SureStore CD/DVD server, for an explanation of its file system for discs and drives, as well as for determining the server configuration and access controls.
- Selecting an access point for server clients . . . . . page 7-1
  When accessing the server and its discs, and when mapping or mounting drives, you have a choice of access points within the server's file system. Also, different access points are intended for administrator/installers and for the clients using the discs.
- Using a web browser and server web page . . . . . page 7-6
  This is the easiest configuration method and is supported by on-line help. However, it requires that you configure the server with an Internet (IP) address on a TCP/IP network.
- Using a text editor to edit the server's files . . . . . page 7-10
  You can use your favorite text editor but must be precise in your editing.
- HP Web JetAdmin and remote management . . . . . page 7-10
  File System and Access Points

Access Points Consult the "File System Description" on page 7-3.

Administrative: Root Folder Access

Using the `Root` folder (which is named `sys` or `/` in some operating systems) at the top level of the server directory structure as the access point allows access to all files, folders, discs, and system files. Network administrators, who configure and monitor the server, normally use this access.

All Discs in Server: Volumes Folder Access

Using the `Volumes` folder as the access point allows access to all CDs and DVDs inserted into the drives in the server. On PCs, this makes it possible to use only one drive letter to access all drives connected to the server. This is the normal access for most users and is a major benefit of the HP SureStore server solution.

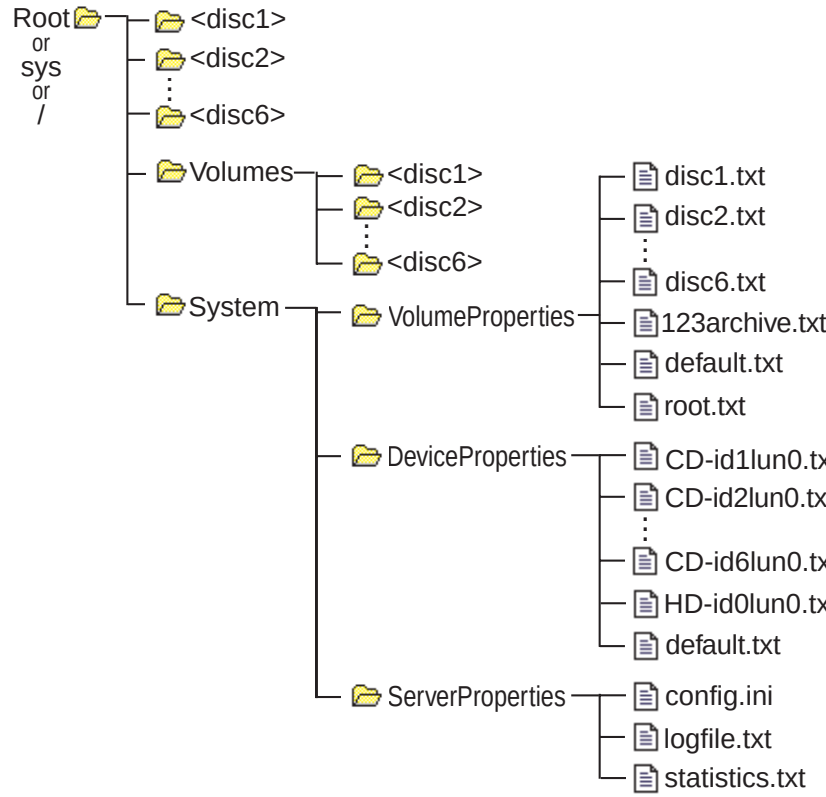
Each Volume: Disc or Drive Access

Two alternatives:

- **Specific Disc**
  An inserted CD- or DVD-ROM disc can be used as the access point. On PCs, this makes it possible to map a drive letter to a single disc. This may be necessary to run CD software that expects to find its data at the root level.
- **Specific Drive**
  A connected CD-ROM or DVD-ROM *drive* (and any disc in the drive) can be used as the client's access point, if the administrator sets the drive instead of the disc to be used for access rights and properties. Then only the files of discs in that drive can be accessed. This means that access restrictions can be defined only once, and users do not have to re-map each time a new disc is inserted into the drive. This is useful for administering periodically updated discs. Also, the disc's volume name will be changed to the default SCSI name, such CD-id2lun0 (you can change this name).

File System Description

The server appears to each system as a file server. Like any other file server, it has a directory structure in which files are stored. The server directory structure is outlined below. The purpose of each folder is more fully explained below.



`Root` (Generic) Folder

This folder (which is named `sys` or `/` in some operating systems) includes everything—the `Volumes` folder (with all of the discs beneath) and the `System` folder. Use this folder as the access point for the administrator.

Disc Folder

There is a folder for each individual disc available in the server. It contains the contents of the disc. Its name will comply with the following rules:

- The volume name held on the disc (here to be called the “disc name”) is used if another volume name has not been set specifically by an administrator (see below).
- If the disc name contains spaces, each space will be changed to an underscore.
- If the disc name duplicates another disc/volume name on the server, an underscore and capital-A (then underscore and capital-B, etc.) will be appended to the duplicate.
- If an administrator has set a volume name, it will be used instead of the disc name. Since the disc name may not be an easily recognizable representation of the disc contents, assigning your own volume name is a convenient way of setting a more significant or recognizable name.

Note

❑ If you run an application from a disc, or look for an application’s associated files on the disc, the application may not recognize it by the volume name you have set. In that case, you will not be able to set a name but must use the disc name instead.

- If an administrator has set access rights by drive rather than disc, then the name of the drive—either the SCSI name, such as CD-id2lun0, or another name configured—it will be used in place of any of the above names. This name is useful for the following reasons:
  - Any disc inserted into the drive will be seen as having this name. Thus you could use the same drive for a series of discs, such as a monthly issue, and you will not have to enter a new name each time you change the disc.
  - When a drive name is set, the volume rights for any disc inserted in the drive are determined by the drive access rights. This is convenient because the access rights need setting only once, while the disc can be changed.

Note: For J4150A only

❑ However, if this disc is then archived, the name will revert to the disc’s volume name.

`Volumes` Folder

Use this folder as the access point for all discs in the server.

When a disc is inserted into a drive, a folder for it is created in the server's `Volumes` folder. All the files on that disc can be accessed through this folder. Use this folder, subordinate to the `Volumes` folder, as the access point for the individual disc.

`System` Folder

The `System` folder contains the following server files:

`DeviceProperties` Folder. This contains files for each CD-ROM drive, DVD-ROM drive, and hard disk drive in the server. The files contain the settings for each drive.

`CD-id1lun0.txt` File. Properties for the CD/DVD-ROM in the second bay, with SCSI ID 1. There will be a file for each CD/DVD-ROM drive in the server.

`HD-id0lun0.txt` File. Properties for the hard disk drive in the first bay, with SCSI ID 0.

`default.txt` File. Default properties for newly inserted drives.

`VolumeProperties` Folder. This contains files for each CD-ROM, DVD-ROM, and archived volume in the server. The files contain the settings for each of these volumes. The first two items in the following list are examples of the volumes to be found in a server.

`NETWARE5.txt` File (for example). Properties for the CD-ROM with the volume name "NETWARE5".

`2F05-509A (removed volume)` File. Default properties for the available disc that has been archived and then physically removed. (For J4152A only)

`Root.txt` File. Properties for the server's root.

`default.txt` File. Default properties for all new discs.

`ServerProperties` Folder. This contains files storing the configuration settings, the log file, and the statistics for the server.

`config.ini` File. Server configuration settings

`logfile.txt` File. Server log file

`statistics.txt` File. Server statistics

Configuration Methods

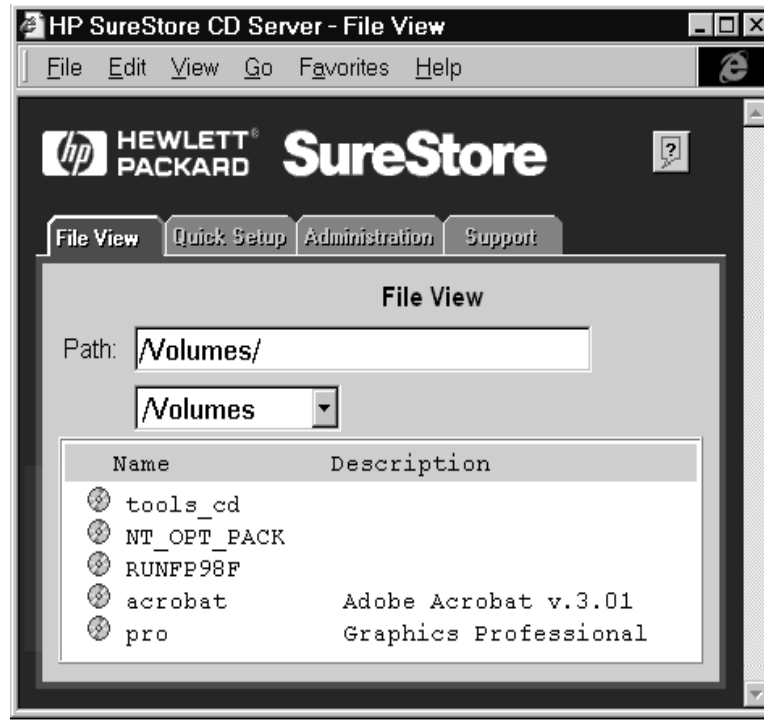
Using a Web Browser and the Server Web Page

To access the server's web page, you must first configure the server with an IP address as described in the section starting on page 3-1. The Enable HTTP setting must be left enabled. You can use any standard web browser, such as Netscape Navigator or Microsoft Internet Explorer. The example here uses Internet Explorer.

1. Start Internet Explorer.
2. In the Address field, enter the URL of the server as:

   ```
   http://<IP-address>
   ```

   As an alternative to the IP address, you can use a host name associated with the IP address and assigned to the server.
3. The main web page for the server is displayed, as shown below.



4. Select the Quick Setup tab for most network configuration needs. The first time during a session, you will be prompted to enter the username (default is **`root`**) and password (default is **`pass`**).

You are prompted to supply:
username = root
password = `pass`
(factory defaults)

HP SureStore CD Server - Quick Setup for Network Settings
File Edit View Go Favorites Help
HEWLETT PACKARD SureStore
File View
Quick Setup
Administration
Support
Quick Setup for Network Settings
Enabled access protocols:
Web (HTTP)
Windows (SMB)
NetWare (NCP)
UNIX (NFS)
Configure the HP SureStore CD Server for your network environment using:
Wizard
The Wizard will guide you through the configuration procedures for each of the network protocols.
Detailed View
The detailed view allows you to manually set the configuration parameters. Use the Restart Server button (below) for changes to take effect.
Restart Server
View Settings

You have the choice of a configuration wizard—click on the Wizard icon—or detailed configuration settings—click on the Detailed View. The wizard leads you through the most basic settings, and then restarts the server when you click the Finish button at the end. The detailed configuration includes most of the details of configuration settings, and when finished you must click the Restart Server button to effect most settings that change how the server appears on the network.

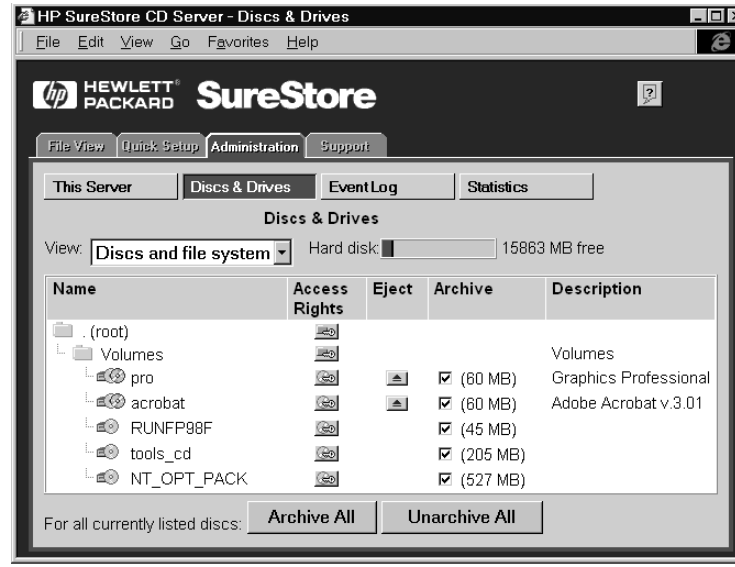
If you need help, click the ? button to display the on-line help. You can display a table of all configuration settings. Click the View Settings button on this Quick Setup page.

5. Some general settings for the server (such as its administrative password) are done under the Administration tab instead of the Quick Setup tab. If you had not supplied the name and password already this session you will be prompted to enter the username (default is **root**) and password (default is **pass**).

   Click the This Server button, and with the server module highlighted, click the Settings button to display the server settings page. When these settings are saved, they do not require restarting the server to take effect.

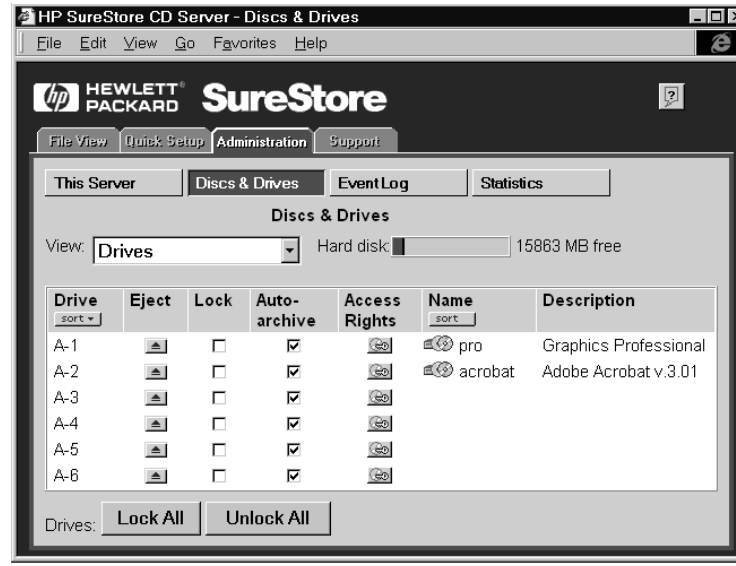
   If you need help, click the ? button to display the on-line help. You can display a table of all configuration settings. Click the View Settings button on this Administration page.

6. To set access rights for the volumes on the server, use the Administration tab and click on the Discs and Drives button.


HP SureStore CD Server - Discs & Drives
File Edit View Go Favorites Help
HEWLETT PACKARD SureStore
File View Quick Setup Administration Support
This Server Discs & Drives Event Log Statistics
Discs & Drives
View: Discs and file system
Hard disk: 15863 MB free
Name Access Rights Eject Archive Description
. (root)
Volumes Volumes
pro (60 MB) Graphics Professional
acrobat (60 MB) Adobe Acrobat v.3.01
RUNFP98F (45 MB)
tools_cd (205 MB)
NT_OPT_PACK (527 MB)
For all currently listed discs: Archive All Unarchive All

One view is for Discs and File System. For each of the discs and access points on the server, you will see an icon in the Access Rights column. Click on that icon to display the Access Rights page. These changes take effect as soon as you OK each page.

Another view is for Drives. You can associate the access rights by drive, for whatever disc in is the drive.


HP SureStore CD Server - Discs & Drives
File Edit View Go Favorites Help
HEWLETT PACKARD SureStore
File View Quick Setup Administration Support
This Server Discs & Drives Event Log Statistics
Discs & Drives
View: Drives
Hard disk: 15863 MB free
Drive Eject Lock Auto-archive Access Rights Name Description
A-1 pro Graphics Professional
A-2 acrobat Adobe Acrobat v.3.01
A-3
A-4
A-5
A-6
Drives: Lock All Unlock All

Note

- Some settings that affect access rights for a particular network type are not found under Discs and Drives. They appear in Quick Setup configuration.

Using a Text Editor to Edit Server's Files

Use a text editor to open the `config.ini` file in the `ServerProperties` folder in the `System` folder on the server. Edit the parameters and values.

CAUTION!

- Make sure there is a space between the equal sign and the parameter value. All other spaces between names of parameters or values are ignored. Do not remove the `[END]` marker from the file.

You must save the file and restart the server to activate the new settings. You can do this by setting the `Restart` parameter in the `config.ini` file to `yes` and saving the file. Instead of setting `Restart` in the file, you can save the file first and then switch the server's power ***off***, wait 10 seconds, and switch power ***on***.

The new settings are ready for use when the server completes its restart. See page 2-5.

Remote Network Management Tools

SNMP

The server includes SNMP broadcast support. Using remote network management tools, you can autodiscover the HP CD/DVD-ROM servers on your network. You can use HP Web JetAdmin to see all installed HP CD/DVD-ROM servers and print servers. This can help you, for example, to check of the health of the networked peripherals or to assign IP addresses.

HP Web JetAdmin

HP Web JetAdmin is available from Hewlett-Packard for downloading from URL: `www.hp.com/go/webjetadmin`

Caching and Archiving Using the Hard Disk

Only for HP J4150A SureStore CD-ROM Server Plus

The hard disk drive included with the HP J4150A SureStore CD-ROM Server Plus is operated automatically for caching and archiving CDs. Disc data that is *cached* on the hard drive will be used automatically to speed up user access when the disc in a physical CD-ROM drive is accessed. A disc that is *archived* on the hard drive can be accessed without the disc being present in a physical CD-ROM drive.

The location of the disc data on the hard drive rather than on a CD-ROM drive is transparent to the users.

Caching

What is Caching?

Caching uses the hard drive to automatically copy disc data, to increase access performance (speed) when a user accesses the disc. (Caching aids in disc and file access; it does not affect data throughput or network performance.)

When the disc is removed from the CD-ROM drive, the disc is no longer accessible from the cache. As long as there is space available, however, the cached data remains and will be used if the disc is again inserted. The cached data is aged and deleted when the space is needed for more frequently accessed files and for archives.
See also the section “Disk Space for Caching and Archiving” on page 8-6.

Types of Caching

Cache Modes

- Partial

  The directory structure on the discs is cached. This speeds up browsing directories and finding files. By default, this mode also includes caching of the frequently accessed files on the discs. The disk space allocated for file caching can be reduced to zero to suspend file caching; then only directory caching is done.

- Mirror

  The full image of all disc data is cached. Mirroring speeds up frequent access and access by multiple users. The image is available only as long as the disc is in the CD-ROM drive.

- None

  No caching is performed. Archiving can still be performed, however (see “Archiving and Replacing Discs” on page 8-3).

The cache mode has no impact on archiving (see “Archiving and Replacing Discs” on page 8-3 and “Disk Space for Caching and Archiving” on page 8-6).

Changing Cache Settings

The factory-default cache mode is partial caching with file caching of 500 megabytes.

You can change the default cache mode for the server by using the Administration web page. Under the Administration tab, click the This Server button and with the server module highlighted, click the Settings button. Then select the Caching and Archiving tab. Your choices are listed below. The caching will be started as a background activity as soon as a disc is inserted into a drive.

- For no caching, change the Cache Mode to None. Then, directories and files on the discs will not be cached.
- For directory caching only, set Cache Mode to Partial and Disk space for file caching to 0 (zero). Then only the directory structure and not the files will be cached.
- For file and directory caching, set Cache Mode to Partial and set the amount of space for file caching. Then the directories and frequently accessed files will be cached.
- For full mirroring of all discs, set Cache mode to Mirror. All disc data will be cached.

For managing disk space usage, see “Disk Space for Caching and Archiving” on page 8-6.

Archiving and Replacing Discs

What is Archiving?

Archiving allows you to store more discs for user access than those fitting into the tower's drives at one time. Archiving uses the hard drive to store a persistent copy of a disc, a full "mirror" copy of all disc data that persists after you remove the actual disc.

If the data is already mirrored (see "Caching" on page 8-1), archiving will make the copy persistent. Archiving is performed independent of the setting of the cache mode (see "Cache Modes" on page 8-2).

Archiving a disc can take up to five minutes (or a few seconds if a mirror of the disc has already been cached), but the disc is meanwhile accessible from the CD-ROM drive. When the archive is complete, an information event is added to the log file (and sent as e-mail if Errors, Warnings, & Info are configured with an e-mail address). In addition, by default the disc will be ejected automatically after archiving, to indicate that you can insert another disc into that CD-ROM drive.

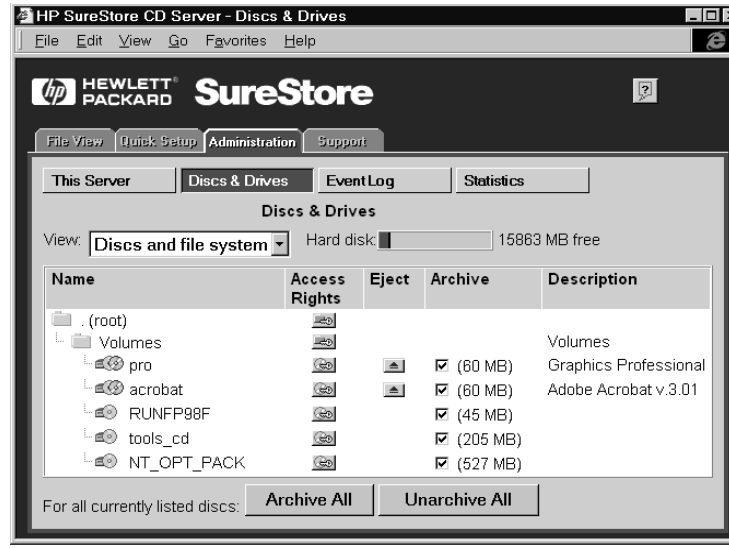
A warning event will be logged if not enough hard drive space is available for an archive.

Auto-archiving causes every disc you insert into a CD-ROM drive to be automatically archived, as long as hard drive space is available. By default, the server auto-archives every disc you insert.

Removing an Archive

An archived disc remains user-accessible until you remove the archive. Three methods are the following:

- On the Administration web page, click Discs and Drives, select the "Discs and file system" view, and under Archive click the checkmark off for an individual disc. This removes the archive copy of the corresponding disc.



- On the Administration web page, click Discs and Drives, select the "Discs and file system" view, and click the Unarchive All button. This removes the archive copies of all the discs listed on the server.
- On the Administration web page, click the This Server button and with the server module highlighted, click the Settings button. Then select the Caching and Archiving tab. Click the "Clear Disk" button to do a "quick format" of the hard disk to remove all cache and archive copies. Automatic caching and archiving of the discs currently installed on the server will be restarted, according to the current configuration.

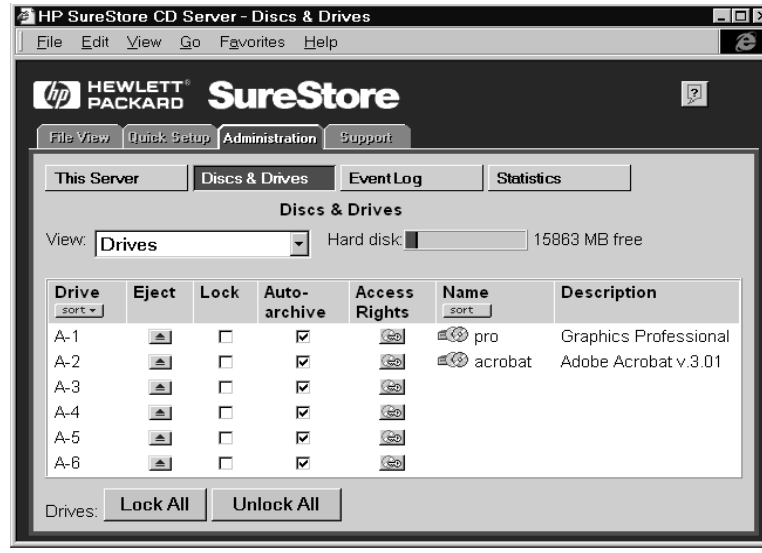
Changing Archive Settings

Auto-archiving for every drive and automatic ejection after archiving are factory defaults, except that by default discs larger than 650 Megabytes will not be automatically archived or mirrored.

The cache mode has no impact on archiving (see "Cache Modes" on page 8-2 and "Disk Space for Caching and Archiving" on page 8-6).

Switching Off Auto-Archiving and Making Specific Archives

You can switch off auto-archiving for specific CD-ROM drives on the Administration web page for Discs and Drives, in the “Drives” view. Then you can set individual drives for auto-archiving, and any disc subsequently inserted into the drive will be archived automatically.


HP SureStore CD Server - Discs & Drives
File Edit View Go Favorites Help
HEWLETT PACKARD SureStore
File View Quick Setup Administration Support
This Server Discs & Drives Event Log Statistics
Discs & Drives
View: Drives
Hard disk: 15863 MB free
Drive Eject Lock Auto-archive Access Rights Name Description
A-1 pro Graphics Professional
A-2 acrobat Adobe Acrobat v.3.01
A-3
A-4
A-5
A-6
Drives: Lock All Unlock All

You can initiate a specific archive of a disc on the Administration web page for Discs and Drives, in the “Discs and file system” view, by checking its Archive box. Clicking the Archive All button specifically archives all the discs in the drives. (See the illustration on page 8-4.)

Switching Off Automatic Ejection

You can switch off automatic ejection following auto-archiving for all drives. On the Administration web page, click the This Server button and with the server module highlighted, click the Settings button. Then select the Caching and Archiving tab and click the Eject checkmark. After archiving, you can eject the disc manually at the tower or by pressing the Eject button on the Administration web page for Discs and Drives, in either view.

This page also allows you to change the following archive settings:

- Maximum size of disc to automatically archive or mirror.
- Minimum size of disc to trigger warnings that not enough hard disk space is left.

Disk Space for Caching and Archiving

Archiving has precedence over mirror caching. Mirroring uses some of the disk space unused by archives. When more space is needed for archiving or mirroring, then the least recently accessed mirrored data will be removed. The number of discs that can be mirrored or archived depends on the amount of data copied, not on an arbitrary disc capacity such as 650 megabytes.

If you run out of space for archiving, you may obtain space for another archive by switching the caching mode to Partial or None or by reducing the space allocated for file caching with Partial mode. Removing a physical disc that has been mirrored or removing an archive copy also will reallocate the disk space.

You can view the usage of hard disk space for caching, and the amount of free space on the Administration web page for Discs and Drives, in either view, and on the Statistics page. The blue band indicates the space currently being used by cached and archived data.

Upgrading the Firmware

The firmware stored in *Flash memory* on the server can easily be updated over the network. All firmware updates supporting CD-ROM and DVD-ROM are free of charge.

Note

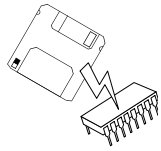
- *Flash Memory:* The program (firmware) that runs your server is stored in Flash memory. This is a memory chip that, like ordinary RAM memory, keeps its contents even when the power is turned off. However, you can erase its contents and write new data to it. When firmware updates with new features are available for your server, you can download them to the flash memory without having to replace any parts.

Checking if an Update is Available

Contact your HP-authorized dealer for the most recent releases of firmware. Your existing firmware version is identified on the Administration web page for This Server, when the server is highlighted (and in the `config.ini` file in the `ServerProperties` folder in the `System` folder).

You can also use the HP Web site or contact your nearest HP Customer Care Center. Refer to appendix A for information.

Updating the Server's Flash Memory



You can implement an update to your Flash memory over the network using FTP on a TCP/IP network. To upgrade over the network you need the following:

- The file with the new server firmware. The file name is `hpcd_<version>` (for example, `hpcd_411.bin` for the firmware release 4.11). Obtain the updated file from the HP Web site or your HP-authorized dealer.
- A computer on the network with TCP/IP and FTP. On Windows NT computers, you can issue the `ftp` command at the DOS prompt.
- The server must also be installed on the network with TCP/IP configuration as described in chapter 3.

Follow the steps below to install new server firmware:

1. Obtain a copy of the firmware update file from your HP-authorized dealer or from HP's Electronic Support services.
2. Login to the server using the command:

   ```
   ftp <IP-address/host-name>
   ```

   where *<IP-address/host-name>* is either the IP address or the host name assigned to the server.
3. You will be prompted for user ID and password. Use the user ID `root`, which has the default password `pass`. (`root` is the user ID with the highest priority.)
4. Issue the command `bin` to change to binary transfer mode.
5. Issue the command:

   ```
   put <filename> flash
   ```

   where *<filename>* is the name of the new server firmware (for example, `hpcd_411.bin`).

CAUTION!

- ❑ Be careful not to interrupt the file transfer. If the transfer is interrupted, the server may become inoperative and must be returned to HP.

6. Wait for the transfer to complete. This normally takes 1 to 4 minutes. The server will then automatically restart with the new server firmware.
7. Log out using the command `quit`, `bye`, or `exit`, depending on your FTP version.
8. Cycle power to the server.

   With the new firmware operating, your password for `root` reverts to the original setting `pass`.

Instructions on how to install your server firmware are also supplied with the firmware update.

Troubleshooting

This chapter will help you to diagnose and resolve problems with the server product. The chapter has these sections:

- Check Front-Panel Indicators. . . . . .page 10-2
- Look Up Your Problem. . . . . .page 10-5
- Procedures for Resolution or Repair. . . . . .page 10-14

If you have identified a problem with hardware or software, you can look for the problem in the second section, “Look Up Your Problem”. If the symptoms are unclear or you do not find your problem listed, then check all the indicators in the first section, “Check Front-Panel Indicators” In both sections, you will be referred to documentation on specific actions you should take.

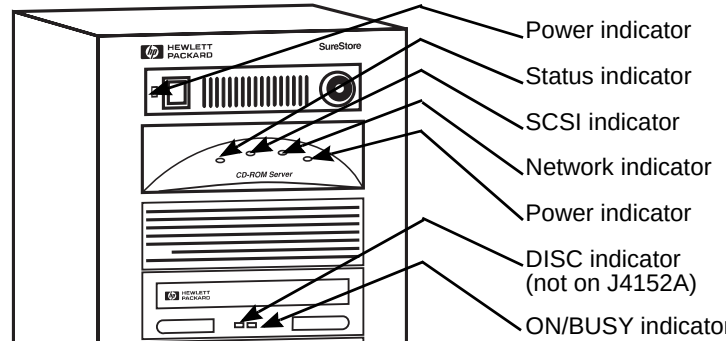
For more help in solving problems, consult the subsequent appendix A, “Getting Support”. It includes the location of HP’s Web site for CD servers, where you can find more problem-solving tips in the “Electronic Support Services” section. It also lists telephone numbers for HP support.

Restart Server

One general method of restarting the server is to switch power off, wait 10 seconds, and switch power on again (power cycle).

Check Front-Panel Indicators

The indicator lights (LEDs) on the front of the tower show the status of the tower, server, and CD/DVD-ROM drives.



On the tower nearest the top (when floor mounted):

- **Power** is ***green (on)*** when power is connected to the tower and the power switch is on.

On the server module, from left to right:

- **Status** is ***green*** or ***off*** during start-up. When the server is ready for use, **Status** remains ***green (on)*** (see page 10-3). For an error condition, it is ***red*** or ***flashing yellow*** (see page 10-4).
- **SCSI** is ***green*** or ***yellow*** during start-up. When the server is ready for use **SCSI** is ***off***, or ***blinking green*** when a disc is being read, or ***blinking green*** when writing to HP J4150A's hard disk (see page 10-3). For an error condition, it is ***red*** (see page 10-4).
- **Network** is ***blinking green*** whenever a packet is received on an 100-Mbit/s network, and ***blinking yellow*** on a 10-Mbit/s network. If the link is lost, it is ***red***.
- **Power** is ***on*** when power is connected from tower to server.

On the HP disc drives, from left to right:

- *(Only on J3278B and J4150A CD-ROM drives)* **DISC** is ***on*** (green) when power is connected from the tower to the drive and a CD is inserted. It is ***off*** when no CD is inserted.
- *(Only on J3278B and J4150A CD-ROM drives)* **ON/BUSY** or *(Only on J4152A DVD-ROM drives)* **BUSY** is ***on*** when power is connected from the tower to the drive. It ***blinks*** in synchrony with access to an inserted disc. It is ***off*** when an inserted disc is not being accessed.

Normal Conditions

The **Power** LEDs on the tower and server module are controlled by hardware and are always ***on*** when power is connected. The following tables describe the state of the other LEDs.

On the Server Module

Event	Status	SCSI	Network
Initial power to unit	Solid Green	Solid Green	Solid Green
During power-up and self-test (approx. 30 seconds to 5 minutes)	1. Solid Green; 2. Off	1. Off; 2. Blink Yellow	Off
After power-up and self-test	Solid Green	Off	Blink Green for each 100-Mb/s packet; Blink Yellow for each 10-Mb/s packet
Disc accessed	Solid Green	Blink Green for read; Blink Yellow for write (on hard drive); Off for no activity	
No disc, and No hard drive archive	Solid Green	Off	
Flash loading	Fast Flash Yellow	Off	Off

On the CD-ROM or DVD-ROM Drive

Event	**Disc,** on J3278B, J4150A	**ON/BUSY**, on J3278B, J4150A	**BUSY**, on J4152A
Initial power to unit	Solid Green	Solid Yellow, with no CD	Off
During power-up and self-test (approx. 30 seconds to 5 minutes)	Solid Green	Solid Yellow, with no CD	Blink Green when drive accessed for testing
After power-up and self-test	Off, with no CD	Solid Yellow, with no CD	Off
Disc accessed	Solid Green	Blink Yellow for read; Off for no activity	Blink Green for read; Off for no activity
No disc, and No hard drive archive	Off	Solid Yellow	Off

Error Conditions

The following tables show how the front-panel LEDs display various problems. Look up the problem in the next section to find the procedure to resolve it.

On the Server Module

Status	SCSI	Network	Problem to Look Up
Off	—	Solid Red	Network connection failure.
Off	Solid Red	Off	No access. SCSI problem.
Off	Flash Red	Off	One or components failed; SCSI problem.
Slow Flash Yellow	Off	Off	Try restarting server. If indicator persists, server module failed.
Flash Yellow and Red	Off	Off	Startup memory error. Server module failed.
Flash Red	Off	Off	Flash load failed or DRAM error. Server module failed.
Solid Red	Off	Off	Flash BIOS failure. Server module failed.

On the CD-ROM or DVD-ROM Drive

Disc, on J3278B, J4150A	**ON/BUSY**, on J3278B, J4150A	**BUSY**, on J4152A	**Problem to Look Up**
Off with CD in	Off with CD in	Off with disc in	If disc inaccessible: power disconnected, defective drive, or SCSI disconnection
Off	Flash Yellow in series of 5	Solid green for about a minute, then Off	Disc read problem, unsupported disc format, or drive problem
—	Continuously On	—	If disc inaccessible: possible SCSI ID conflict

Look Up Your Problem

Power LED is Off

If the tower's **Power** LED is not on, check the following causes and corresponding solutions.

Possible Causes	Resolution
Power switch is ***off***	Make sure the power switch is ***on***.
Power cable not connected	Make sure the power cable is connected. Be sure the power cable is appropriate for your country.
Input voltage is set incorrectly	Switch the power switch ***off***. Check the input power setting—the switch on the back of the tower. Modify the setting only if you are sure the current setting is wrong. **CAUTION**: Your HP-authorized dealer has normally set the input voltage as required for the country of usage. A lower setting will destroy the power supply. A higher setting will cause a malfunction at a load above four drives, but will not cause any damage. Wait 10 seconds, and switch power ***on*** again (power cycle).
Power loss	Your facility may be undergoing a blackout or brownout. Make sure the power source for the tower is active. Switch power ***off***, wait 10 seconds, and switch power ***on*** again (power cycle).
Power supply malfunction	Call HP support for help, as described in appendices A and B.

Disc Drive Problems

If you hear excessive noise on a CD- or DVD-ROM drive, or hear the disc "jump", or if the LEDs on the drives do not operate as expected (see page 10-2 to page 10-4), you could have a defective or unreadable disc in the drive.

Defective Disc

HP CD-ROM drives in the tower are designed to automatically switch down to lower speeds when they encounter a defect or a scratch on the disc, and then to continue to read data at the slower speed until a new read command is transmitted to the drive. However, fingerprints, contaminants, or deep scratches on the disc surface may prevent the drive from successfully reading data. Perform the disc cleaning procedure on page 2-8.

If the problem persists, test a different disc in the same drive; if that disc works properly, the previous disc may be defective. If no disc works properly in the drive, then switch off the server, wait 10 seconds, then switch it on again (power cycle), and wait for the self-test to complete and **Status** to be ***solid green***.

Also verify that the disc is in a supported format (described on page 10-7). If the problem persists, the drive may be faulty; see "Isolate Faulty Hardware Component" on page 10-16.

Ejected Disc

HP CD-ROM drives in the HP server are designed to automatically eject any unreadable disc. HP DVD-ROM drives in the HP server will eject a disc that is blank or has no table of contents. If a disc is ejected, verify that the disc is in the tray with the label side towards the top of the tower (as floor mounted). Or the disc may be blank, incorrectly written, or damaged. Also verify that the disc is in a supported format (described on page 10-7).

Test a different disc in the same drive; if that disc works properly, the previous disc may be defective. If no disc works properly in the drive, then switch off the server, wait 10 seconds, then switch it on again (power cycle), and wait for the self-test to complete and **Status** to be ***solid green***. If problem persists, the drive may be faulty; see "Isolate Faulty Hardware Component" on page 10-16.

Disc and Drive Access Problems

CD-ROM or DVD-ROM Read or Drive Problem

If you cannot see or access the CD in a CD-ROM drive, and you see the **ON/BUSY** indicator ***flashing*** 5 times in a series, then open and close the CD tray door using the Stop/Eject button. Wait to see if the **Disc** goes ***on*** and **ON/BUSY** goes ***off***; you should then have access.

On both CD- and DVD-ROM drives, try switching off the server, wait 10 seconds, then switch it on again (power cycle), and wait for the self-test to complete and **Status** to be ***solid green***.

If a problem persists, refer to the problems "Defective Disc" on page 10-6 and "Errors when Accessing Server or Discs" on page 10-9. If none of those conditions apply, the drive may be faulty; see "Isolate Faulty Hardware Component" on page 10-16.

Drive Access Problem

If you cannot see a drive on the network, but you can see the server on the network, then use the procedure for "SCSI Problems" on page 10-10.

Disc Defective or Unreadable

If a LED error condition indicates this possibility, then start at "Disc Drive Problems" on page 10-5.

Disc Format Unsupported

If the LEDs on a CD-ROM drive indicate a possible problem with disc format, check that the disc is in a supported format. Formats are listed in the server specifications for "Supported CD & DVD File Systems" on page C-1.

Test a different disc in the same drive; if that disc works properly, the previous disc may be defective. If no disc works properly in the drive, then switch off the server, wait 10 seconds, then switch it on again (power cycle), and wait for the self-test to complete and **Status** to be ***solid green***. If problem persists, the drive may be faulty; see "Isolate Faulty Hardware Component" on page 10-16.

Server Access Failure

Cannot Locate Server

If you are having trouble locating your server on your network, note the following:

- The server may not immediately appear because your system and network protocols may require significant time to locate the server. You should wait at least 5 minutes and then try again.
- In Windows networks, a “master browser” function performed by one of the systems on your network may be required. “Browse master” services are commonly performed by file servers, but on peer-to-peer networks, the service may be missing. Refer to your Windows system documentation for information on adding file-server services.
- Check if the server is talking on the network at all—whether you can ping it in an IP network or whether it appears in the Network Neighborhood in a Windows network. See also “Difficulty Locating the Server in NetWare” on page 10-11.
- If the server will not appear on the network, or you suspect that your configuration changes have serious errors, then you can reset the server to the factory-default condition, and cycle its power again, to see if you can reconfigure it for the network. Refer to the procedure to “Restore Factory-Default Settings” on page 10-14.

If you cannot install the server to the network, call HP support for help in isolating the failure, or go to HP’s Web site containing more problem-solving tips, as described in appendix A, “Getting Support”.

If your server has failed according to indicator error conditions on page 10-4, then the server module may be faulty; go to “Isolate Faulty Hardware Component” from page 10-16 to page 10-19.

Errors when Accessing Server or Discs

If you get error messages when accessing the server or any disc:

- If you have extended your server with an expansion tower, make sure it is switched on and that its SCSI connector is terminated. Check all SCSI connections. Make sure the expansion tower is switched on prior to switching on the server. Use the procedures starting on page 2-3.
- **TCP/IP network.** Verify that you have assigned a unique Internet (IP) address to the server. See "Set the IP Address for the Server" on page 3-1.
- **Microsoft Windows networking**. Verify that the SMB protocol is enabled; the NetBIOS Protocol Bindings for NetBEUI and/or TCP/IP should be enabled.
- Check the front-panel indicator lights and the "Error Conditions" table on page 10-4 to help identify problems.

Lost Password for Web Access to Server

Perform the procedure for "Restore Factory-Default Settings" on page 10-14.

Software on Disc Will Not Run

- If you have successfully installed a disc, but software on it fails to run or generates error messages, the software may expect the disc data to be mapped at root level. In the Microsoft and IBM network operating system environments, you must then assign a drive letter to that particular drive or disc. See "2. Map Drives" on page 4-2.
- Some applications access the disc using its volume name originally on the disc; if you have assigned a new volume name, it may fail to recognize the disc and thus fail to run (see page 7-4).
- Some CD-ROMs require the MSCDEX (Microsoft) driver. You may need to contact Microsoft.
- It may be necessary to restrict the number of users to one if the disc is a single-user version.

SCSI Problems

If the **Status** LED is off and the **SCSI** LED is ***red***, most likely there is a problem with the server, the tower's SCSI bus, or a drive (a CD-ROM, DVD-ROM, or hard disk drive). Check the server module error conditions on page 10-4 for specific LED patterns.

The Comprehensive SCSI Diagnosis Procedure

1. See if you can access the server's web page. If you *cannot*, then proceed to the next step. If you *can* reach the server, then:

   a. Under the Administration tab, click the "This Server" button, and click on the picture for each device in the tower. Note any problems shown for a particular drive, and check that drive first in step 2 below.

   b. Switch off the server, wait 10 seconds, and then switch it on again (power cycle). Wait for the self-test process to complete.

   If problems have not been corrected, proceed to the next step.

2. Check the LEDs on all CD/DVD-ROM drives for error conditions.

   If one or some of the drives show an error condition, remove the drive, using the drive procedure following "Replace Hardware Components" on page 10-17. Do step 1b above and again check the LEDs on the server and all drives. If the error has been corrected, then the drive module is faulty and must be replaced; see "Isolate Faulty Hardware Component" on page 10-16. If the error persists, then proceed to the next step.

   If you show no errors on your drives or have only DVD-ROM drives, proceed to the next step.

3. Pull out the server module far enough to disconnect only the SCSI bus—the long flat ribbon cable—using the server procedure following "Replace Hardware Components" on page 10-17.

   Do step 1c above and check the LEDs on the server and all drives. If the error has been corrected, proceed to the next step. If the error persists, then the server module is faulty and must be replaced; see "Isolate Faulty Hardware Component" on page 10-16.

4. Switch off the server. Remove all drives (CD-ROM, DVD-ROM, and hard disk drives) from the tower—using the drive procedure following "Replace Hardware Components" on page 10-17. Making sure the power is still off, reattach the SCSI connection—the long flat ribbon cable—to the server. Switch on the server. Wait for the self-test process to complete and check the following:

   If the server's **SCSI** LED is normal, then the tower is working and a drive may be faulty; proceed to the next step.

   If the server's **SCSI** LED is *not* normal, then the tower may be faulty and need replacement; see "Isolate Faulty Hardware Component" on page 10-16.

5. Reinstall the drive modules one by one, by switching off power, installing the drive in the tower, switching on power, inserting a disc, attempting to access it, and checking previous LED error conditions. The drive that reintroduces the error condition is faulty and must be replaced; see "Isolate Faulty Hardware Component" on page 10-16.

Note:

- If you have extended your server with an expansion tower and you can access only the drives on that tower, then check the SCSI connections on the rear of both towers. If the connectors are seated properly, then pull out the server module far enough to check the long flat ribbon cable connection (using the server procedure following "Replace Hardware Components" on page 10-17). To diagnose possible SCSI cable failures, see the troubleshooting section of the expansion tower user's guide.

Difficulty Locating the Server in NetWare

Ethernet Frame Type Incompatibility

There are four different frame types on Ethernet networks: Ethernet II, IEEE 802.3, IEEE 802.2, and SNAP. All four frame types are enabled by default, and the HP CD/DVD-ROM Server will automatically detect the frame type used on the network. Ensure that your frame type is compatible with the other servers on your network. Check the enabled frame type settings on the Administration web page, in the Detailed View for the NetWare (NCP) tab.

NetWare File Server Needed

If you are unable to locate your HP CD/DVD-ROM server, a NetWare file server may be required on your network.

Errors When Changing Configuration

If your configuration changes have serious errors and you cannot succeed in changing back to a working configuration, then you can reset the server to the factory-default condition, cycle its power again, and then reconfigure it for your network. Use the procedure to “Restore Factory-Default Settings” on page 10-14.

If you then cannot reinstall the server to the network successfully, then call HP support for help in isolating the failure, as described in appendix A, “Getting Support”. Or, you can see “Isolate Network and Software Problems” on page 10-16.

NetWare NDS Installation Errors

If you experience problems when installing your server in a NetWare NDS network, any errors that occur will be written to a file named `logfile.txt` located in the `ServerProperties` folder in the `System` folder on the server.

Summary of `System\ServerProperties\logfile.txt` error messages for NDS:

Error	Description
Installation failed: NDS tree not found	The server could not find the NDS tree. Please check the spelling.
Installation failed: Administrator object missing	The server could not find the user object specified for the administrator Account Name setting. Please check the spelling.
Installation failed: Administrator password is incorrect	The Password supplied for the Account Name could not be used to log in as the user. Please check the spelling.
Installation failed: Server context not found	The context specified for the NDS Tree Context was not found. Verify that the spelling is correct.
Installation failed: Insufficient rights to create server object	The user specified for the administrator Account Name doesn't have sufficient rights to create the server object in the specified context.
Installation failed: NDS Server object already exists	You have tried to install the server on top of an existing server object.
Installation warning: Could not extend NDS Schema (class 1) Installation warning: Could not extend NDS Schema (class 2) Installation warning: Could not extend NDS Schema (attribute)	These errors are the result of insufficient rights of the administrator trying to install the server. The server here tries to extend the NDS Schema with an extra attribute to the "NCP Server" class in NDS. This requires *supervisor* rights to the *root* object. This is only necessary for the first HP CD/DVD-ROM server being installed in the tree. For all other HP CD/DVD-ROM servers being installed in the tree, the attribute will already be defined and this step is not necessary.

Procedures for Resolution and Repair

This section contains the procedures referenced from the earlier sections on the front-panel indicators “Error Conditions” on page 10-4 and the “Problem” section starting on page 10-5.

Restore Factory-Default Settings

The factory-default settings can be restored if required (for example, if you have accidently disabled all network protocols, or if you do not know the password).

Note

- ❑ The LAN hardware (MAC) address setting will remain unchanged, but all other settings are reset. This includes passwords and the Internet (IP) address if one had been configured.

The methods are listed here and the steps for each method follow.

- Using a web browser on a TCP/IP network
- Using FTP on a TCP/IP network
- Using the Push button on the back of the server

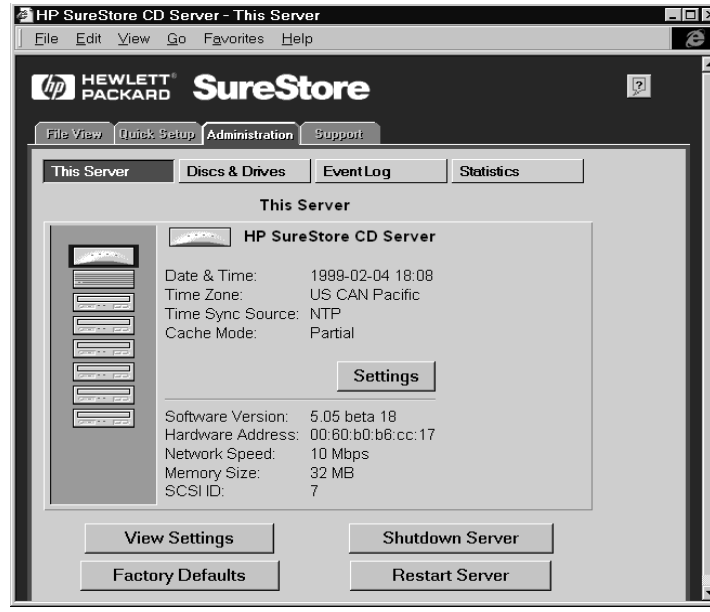
Using a Web Browser

1. Start the Netscape Navigator or Internet Explorer to go the server’s web page, as described in steps 1–3 in “Using a Web Browser and the Server Web Page” on page 7-6.
2. Select the Administration tab. If you have not supplied the name and password already this session, you would be prompted to enter the username (default is **`root`**) and password (default is **`pass`**). Click the This Server button. See the illustration on the next page. Click on the Restore Factory Defaults button.

You are prompted to supply:

username = root

password = `pass` (factory defaults)



On the next page, confirm that you wish to restore the defaults. The factory-default settings will be restored, and the server will automatically restart. If it fails to restart, try switching the power ***off***, waiting 10 seconds, and then switching ***on*** power again.

Using FTP

1. Log in to the server with the command:

   ```
   ftp <IP-address>/<host-name>
   ```

   where *<IP-address>/<host-name>* is either the IP address or the host name assigned to the server.

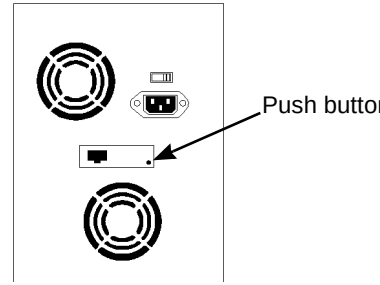
2. You will be prompted for user ID and password. Use the user ID `root`, which has the default password `pass`. (`root` is the user ID with the highest priority.)

3. Issue the command `get defaults` to restore the default settings. The unit will then automatically restart.

4. Log out using the command `quit`, `bye`, or `exit`, depending on your FTP version.

The server is now reset to factory-default settings and should automatically restart. If it fails to restart, try switching the power ***off***, waiting 10 seconds, and then switching ***on*** the power again.

Using the Recessed Push Button



1. Switch ***off*** the server tower (using the switch on the front).
2. On the back of the tower, next to the network connector, a push button is recessed behind a small hole. Insert a narrow implement, such as a paper clip, into the hole to push and hold the button while you switch ***on*** power to the tower (using the switch on the front). Continue to press the button until the **Status** LED ***flashes red*** at regular intervals. This will take ten to fifteen seconds.
3. Release the button.
4. Restart the server by switching the server ***off***, waiting 10 seconds, and then switching ***on*** the power again.

Isolate Network and Software Problems

For help in solving problems with the firmware, consult appendix A, "Getting Support", for HP's Web site containing more problem-solving tips and for HP support telephone numbers.

Isolate Faulty Hardware Component

If you suspect your server hardware is faulty, the fault must be isolated to one of the components that can be replaced by Hewlett-Packard Company:

- An HP CD-ROM drive for HP towers
- The server module
- The tower, that is, all the other hardware components

For replacement keys and cords, see page 2-2.

The previous sections of this "Troubleshooting" chapter can help you isolate the problem to hardware. Call HP telephone support for help in definitively isolating the fault, and to order the replacement for a component determined to be faulty. To perform the replacement, proceed with replacement procedures in the following section.

Replace Hardware Components

Opening the Tower

1. Switch ***off*** power to the tower (using the switch on the front).

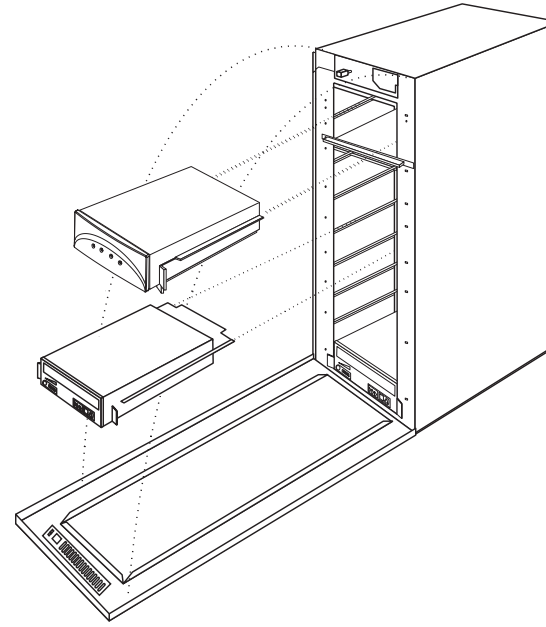
Note

- ❑ These instructions assume that the tower is floor-mounted rather than rack-mounted. “Top” and “up” mean toward the front panel power switch.

2. Use the key to unlock the front cover. The cover is locked when the key index points to the right. The cover is unlocked when the key index points up.
3. Place both of your hands on the top two corners of the front cover and carefully pull it towards you. The cover remains attached at the bottom. (See the illustration on the next page.)
4. You can now remove the front cover by lifting it up, making sure that the flange at the bottom of the cover has cleared the opening of the tower casing. Set the front cover aside.

Replacing an HP CD-ROM, DVD-ROM, or Hard Disk Drive

1. With the front cover off (see the preceding procedure), remove a drive module by placing both hands on the two handles on both sides. Pull the module out from the front of the bay using even pressure on both handles.



2. Return a drive using the warranty procedure described in appendix B, “Warranty”.
3. Install the replacement HP drive module by aligning the rails with the two grooves provided in each bay of the tower. Slide the module in by holding the two handles on both sides and pushing firmly until it is seated properly. Just before it stops, you should feel the module inserting into its socket.
4. Replace the front cover by first hooking the flange of the cover into the bottom of the tower case. Close the cover by pushing it towards the main body of the tower. Lock the cover using the key. Refer to the installation instructions in chapter 2 to restart the server.

Replacing the Server Module

1. With the front cover off (see “Opening the Tower” on page 10-17), slide the server out from the front of the top bay of the tower—until the power supply, SCSI connector, and network connectors are visible.
2. Remove the connectors from the server module, being careful to not bend the ribbon cable or wires very deeply.
3. Return the server module using the warranty procedure described in appendix B, “Warranty”.
4. The replacement server module has a LAN hardware (MAC) address that is different from the one recorded on the LAN Address label on the (top of the) tower. It will be labeled on the bottom of the replacement module.
5. To install the replacement module, you will install a package of mounting rails with the included instructions, and then reattach the connectors described above.
6. Replace the front cover by first hooking the flange of the cover into the bottom of the tower case. Close the cover by pushing it towards the main body of the tower. Lock the cover using the key. Refer to the installation instructions in chapter 2 to reinstall the server on the network. Use the new LAN hardware address when setting up network access again (chapters 3–6).

Replacing the Tower Component

1. Before returning a faulty tower to HP, remove and retain all HP drive modules and the server module, as described in the previous three procedures.
2. Remove and save the LAN Address label, or copy and retain the information recorded on it.
3. Return the tower in the product package. Use the warranty procedure described in appendix B, “Warranty”.
4. When you receive the replacement tower, record the old label information on it (see step 2 above), or locate the LAN hardware address on a label on the bottom of the server module. The LAN hardware address is determined by the existing server module.
5. Reinstall the replacement tower by reinstalling the server module and the drives (reversing previous steps).
6. Replace the front cover by first hooking the flange of the cover into the bottom of the tower case. Close the cover by pushing it towards the main body of the tower. Lock the cover using the key. Refer to the installation instructions in chapter 2 to reinstall the server on the network.

Getting Support

HP Customer Care Centers Phone Numbers

North America		USA & Canada	970-635-1000
Latin America:			
Argentina	541-778-8380	Mexico	01 800-472-668446 01 800-HPContigo
Brazil	011-829-6612		
Chile	800-360999	Venezuela	800-47-888
Europe and Middle East and Africa:			
Austria	0 7114 201080	Norway	22 11 6299
Belgium (Dutch)	0 2 626 8806	Poland	0 22 865 9999
Belgium (French)	0 2 626 8807	Portugal	0 1 318 0065
Denmark	3929 4099	Russian Federation	095 916 98 21
Finland	0 203 47 288	South Africa	011 8061030
France	0 1 43 62 34 34	Spain	902 321 123
Germany	0 180 52 58 143	Sweden	0 8 619 2170
Hungary	36 (1) 252 4505	Switzerland	0 848 80 11 11
Ireland	0 1 662 5525	Turkey	90 1 224 59 25
Israel, Middle East	0 9 952 4848	United Kingdom	0 171 512 52 02
Italy	02 264 10350	Europe outside the UK (English)	+44 171 512 52 02
Netherlands	0 20 606 8751		
Asia and Pacific:			
Australia	3 8877 8000	Malaysia	0 3 295 2566
China	0 10 6564 5959	New Zealand	0 9 356 6640
Hong Kong	800 96 7729	Philippines	0 2 867 3551
India	0 11 682 6035	Singapore	0 272 5300
Indonesia	0 21 350 3408	Taiwan	0 2 717 0055
Japan	0 3 3335 8333	Thailand	0 2 661 4000
Korea	0 2 3270-0700, outside Seoul: 080 999 0700		
For all other countries, contact your reseller.			

Electronic Support Services

Hewlett-Packard provides software utilities, firmware upgrades, and support information for the HP SureStore CD/DVD-ROM servers on the World Wide Web and various bulletin board services.

World Wide Web	HP's Electronic Support Center: `http://www.hp.com/go/cdrom_server`
America Online	Go to Keyword `hp` to reach the HP forum. Select "HP Support Documents" Select "Networked Storage"
CompuServe	`go hp` to reach the HP forum. To sign up for CompuServe, call (800) 848-8199 and ask for Representative #51 (USA only).

Warranty

Obtaining Warranty Service

Your Authorized Dealer

If you encounter difficulty, begin by contacting the HP Authorized Dealer who sold this product to you. Your HP Authorized Dealer will be familiar with your requirements and can provide assistance.

Service from HP Customer Care Centers

Hewlett-Packard's Customer Care Centers will assist you in case of difficulties with your HP SureStore CD/DVD-ROM servers. Use the telephone numbers in appendix A, "Getting Support", for all post-sales support, including problems and failures with the product. They will help you to troubleshoot and isolate the failed components, and they will provide warranty service.

Preparation

Go to the "Troubleshooting" chapter 10, and try to identify the failing component in your product—either the server, the tower, or an HP drive. Also prepare the following information:

- HP product number
- Serial number
- Date of purchase
- Your shipping address

Then call an HP Customer Care Center as described above to arrange replacement of the defective component.

Service Billing (Out of Warranty)

When ordering a replacement component for out-of-warranty service, you may be charged a repair cost. See your HP Authorized Dealer or local HP Sales and Service Office representative.

Or, you can call HP at (800) 366-8040 (USA only). Prepare to supply shipping and billing addresses and one of the following:

- Credit card number with expiration date
- For customers having an established account with HP, a purchase order number.

Service Outside the USA

Customers outside the USA also should call the Customer Care Center telephone number for their country in appendix A, “Getting Support”. Once out of the warranty period, they may contact their HP Authorized Dealer or HP Sales and Service Office to obtain information on prices, exchange component availability, and instructions.

Your Warranty

Two Year, Return-to-HP Warranty

The components of your HP SureStore CD/DVD-ROM server—the server module and the tower and the HP drives—are warranted against defects in materials and workmanship for a period of two years from the date of receipt by the end user. During the warranty period, HP will replace the component at no charge provided the defective component is returned. You may return the defective component to HP after you have received the replacement component and replaced it in the product.

This warranty does not apply if the product has been damaged by accident or misuse, or as a result of service or modification by other than an authorized Hewlett-Packard Service Facility. No other express warranty is given by Hewlett-Packard. Hewlett-Packard shall not be responsible for consequential damages.

For your records, please retain your original proof of purchase. Record the product number and serial number. Your product number is on a white label on the rear of your tower, for example, “J3278B”. The serial number is on the same label.

For Specific Regions

For Australia and New Zealand

For consumer transactions in Australia and New Zealand:
The warranty terms contained herein—except to the extent lawfully permitted—do not exclude, restrict, or modify, and are in addition to, the mandatory statutory rights applicable to the sale of this product to you.

Póliza de Garantía (México)

Hewlett-Packard de México, S. A. de C. V. con domicilio en:
Prolongación Reforma No. 470
Col. Lomas de Sta. Fe, 01210
Delegación Alvaro Obregón
Tel. 326 46 00

Garantiza este producto por el término de doce meses en todas sus partes y mano de obra contra cualquier defecto de fabricación y funcionamiento a partir de la fecha de entrega al consumidor final. En el caso de productos que requieran de enseñanza o adiestramiento en su manejo o en su instalación, a partir de la fecha en que hubiese quedado operando normalmente el producto después de su instalación en el domicilio que señale el consumidor.

CONDICIONES :

1. Centros de Servicio, Refacciones y Partes:

Para hacer efectiva esta garantía, no podrán exigirse mayores requisitos que la presentación de esta póliza junto con el producto en el lugar donde fue adquirido o en el centro de servicio ubicado en el domicilio de la parte superior de esta hoja, mismo en el que se pueden adquirir refacciones y partes.

2. Cobertura:

La Empresa se compromete a reparar o cambiar el producto, así como las piezas y componentes defectuosos del mismo, sin ningún cargo para el consumidor. Los gastos de transportación que se deriven de su cumplimiento serán cubiertos por Hewlett-Packard de México, S. A. de C. V.

<table>
<tr><td colspan="2">Producto</td><td colspan="2">Marca</td><td>Modelo</td></tr>
<tr><td colspan="2">No. de Serie</td><td colspan="3">Nombre del Distribuidor</td></tr>
<tr><td colspan="5">Dirección : (Calle, Número, Colonia o Poblado, Delegación o Municipio)</td></tr>
<tr><td>C.P.</td><td>Ciudad.</td><td>Estado</td><td colspan="2">Teléfono</td></tr>
<tr><td colspan="5">Fecha de entrega o instalación</td></tr>
</table>

3. Tiempo de Reparación:

El tiempo de reparación en ningún caso será mayor a treinta días contados a partir de la recepción del producto en cualquiera de los sitios en donde pueda hacerse efectiva la garantía.

4. Limitaciones:

Esta garantía no es válida en los siguientes casos:

1. Cuando el producto ha sido utilizado en condiciones distintas a las normales.
2. Cuando el producto no ha sido operado de acuerdo con el instructivo de uso en idioma Español proporcionado.
3. Cuando el producto ha sido alterado o reparado por personas no autorizadas por Hewlett-Packard de México, S.A. de C. V.

Notas:

El consumidor podrá solicitar que se haga efectiva la garantía ante la propia casa comercial donde adquirió el producto siempre y cuando el fabricante o importador no cuente con talleres de servicio.

En caso de que la presente garantía se extraviara, el consumidor puede recurrir a su proveedor para que se le expida otra póliza de garantía, previa presentación de la nota de compra o factura respectiva.

Certificado de Garantia (Argentina)

Hewlett-Packard Argentina, S. A.
Montañeses 2150
1428 Buenos Aires
Argentina
Tel. 787 7100

Producto:	
Modelo:	
No. de serie:	
Fecha de entrega:	
Vigencia de la garantía:	
Extensión de la garantía:	

A. Cobertura de la garantía:

1. Hewlett-Packard Argentina, S.A. (HPA) garantiza al cliente (usuario final) que el producto al que se refiere esta garantía estará libre de defectos de fabricación y de mano de obra por el término antes indicado contando desde la fecha de compra del producto por parte del usuario final original a un distribuidor o comercializador debidamente autorizado por HPA.

2. La presente garantía cubre únicamente aquellos defectos que surgiesen como resultado del uso normal del producto y no por aquellos que resultasen de:

   a. Mantenimiento inapropiado o inadecuado, alteración o reparación realizados por personal no autorizado por HPA;

   b. Uso de software, accesorios, soportes, suministros, consumibles o interfaz no suministrados por HPA;

   c. Modificaciones no autorizadas o uso indebido;

   d. Operación fuera de las especificaciones ambientales para el producto, incluyendo abuso del ciclo de trabajo o uso de cargas de conmutadores sin protección contra sobretensiones;

   e. Uso de medios de impresión o tarjetas de memoria no soportados;

   f. Lugar de uso o mantenimiento inapropiados;

   g. Daños durante el traslado; o

   h. Cualquier violación de las condiciones de uso, instalación y mantenimiento necesarias especificadas en el Manual de Operaciones.

3. Si el cliente (usuario final), durante el periodo de garantía, pusiera en conocimiento de HPA la existencia de los defectos definidos anteriormente, HPA podrá, según prefiera, reparar o reemplazar el producto si está averiado. Cualquier producto de reemplazo será nuevo o como nuevo. En caso que al momento del reemplazo no hubiese disponible un producto idéntico al reemplazado (ya sea por discontinuación de su producción, falta de stock o por cualquier otra causa), HPA se reserva el derecho de suministrar un producto de prestaciones o funcionalidad por lo menos iguales a las del producto reemplazado. Si luego de un plazo razonable, no fuese posible para HPA reparar o reemplazar el producto, el cliente tendrá derecho, como única compensación, al reintegro del precio de compra, contra la devolución del producto a HPA.

B. Limitación de la garantía:

1. NI HPA, NI NINGUNA ENTIDAD O PERSONA DIRECTA O INDIRECTAMENTE VINCULADA O RELACIONADA CON HPA: A) OFRECEN NINGUNA OTRA GARANTIA DE NINGUNA INDOLE, EXPRESA O IMPLICITA, ORAL O ESCRITA, RESPECTO AL PRODUCTO AL QUE SE REFIERE ESTA GARANTIA; O B) FORMULAN NINGUNA GARANTIA

IMPLICITA DE COMERCIALIZACIÓN O ADECUACIÓN DEL PRODUCTO PARA UN PROPOSITO DETERMINADO.

HPA NO OFRECE NINGUNA GARANTÍA DE QUE LA OPERACIÓN DE SUS PRODUCTOS SERÁ ININTERRUMPIDA O LIBRE DE ERRORES.

C. Exoneración de responsabilidad:

EXCEPTUANDO LAS OBLIGACIONES EXPUESTAS EN ESTE CERTIFICADO DE GARANTIA, BAJO NINGUNA CIRCUNSTANCIA HPA SERÁ RESPONSABLE DE CUALQUIER DAÑO DIRECTO O INDIRECTO (INCLUYENDO SIN LIMITACIÓN, PERDIDA DE DATOS O LUCRO CESANTE) O POR CUALQUIER DAÑO O PERJUICIO QUE SEA CONSECUENCIA DIRECTA, INDIRECTA O REMOTA DEL USO O MAL FUNCIONAMIENTO DEL PRODUCTO, CUALQUIERA QUE SEA EL FUNDAMENTO DEL RECLAMO (CONTRACTUAL, EXTRACONTRACTUAL O LEGAL).

LOS REMEDIOS DESCRITOS EN ESTA GARANTIA SON LOS UNICOS Y EXCLUSIVOS.

D. Condiciones particulares:

E. Reparaciones:

Comuníquese con el distribuidor o comercializador debidamente autorizado por HPA que le vendió este producto, o para servicio mas rápido, llame al Centro de Asistencia Técnica, al numero 787-8080.

Las reparaciones se llevarán a cabo en los centros autorizados de servicio en Argentina, contra la presentación del producto, este Certificado de Garantía y la factura original de compra del producto, en el caso de impresoras presentar la HP Card.

Technical Specifications

Note ❑ All specifications are subject to change without prior notice.

Server

Dimensions	Height: 440 mm (17.5 in) Width: 215 mm (8.5 in) Depth: 370 mm (14.5 in)
Weight	J4150A: 20.46 kg (45.10 lb) J4152A: 20.60 kg (45.45 lb) J3278B: 20.44 kg (45.05 lb)
Front Panel Security	Front Door Lock, barrel type. Mechanisms not removable when door is locked. Media removable when door is locked.
Backplane PCB	Manages power distribution, SCSI ID setting, and SCSI interconnect. CD-ROM drives are connected using a single card-edge connector.
Firmware Updates	Flash memory allows downloading the latest firmware to update operation, requiring FTP on a TCP/IP network.
Supported CD & DVD File Systems	CD-ROM: Multisession, High Sierra (HSF), ISO 9660 Level 3 with extensions: Rock Ridge, Joliet UDF v1.0x, 1.5, or UDF with ISO 9660 header DVD-ROM, CD-R, CD-RW (for read only): ISO 9660 Level 3, packet-written UDF v1.0x, 1.5, or UDF with ISO 9660 header

Interface Connectors

Network	RJ-45: 10Base-T and 100Base-TX, with twisted-pair cabling
CD/DVD-ROM Drives	SCSI-2, direct plug-in for HP CD/DVD-ROM drive module
External SCSI	50-pin high-density SCSI-2, latch&thumb screw attachment

HP SureStore CD/DVD-ROM Drives

	HP 32X CD-ROM Drive	HP DVD-ROM Drive
Data Transfer Rate:	Full CAV	Full CAV
CD Sustained	2.082 MByte/s (14X speed) 4.828 MByte/s (32X speed)	4.8 MByte/s (32X speed)
CD Burst	10 MByte/s (synch) 5 MByte/s (asynch/synch)	10 MByte/s (synch) 5 MByte/s (asynch/synch)
DVD Sustained	—	6.75 MByte/s (6X speed)
DVD Burst	—	(same as for CD Burst)
Random Access Speed	CD: 85 ms	CD: 80 ms DVD: 110 ms
Data Buffer	512 KByte (256 blocks)	512 KByte (256 blocks)
Eject	Auto Eject; Manual Emergency Eject	
Disc Loading	Automatic tray: 30,000 load cycles	
Power Consumption	8.5 W	13.6 W
Interface Connector	50-pin header-type connection to tower through HP module carrier only	
Dimensions	149.00 mm x 42.7 mm x 250.00 mm with carrier	148.00 mm x 42.3 mm x 250.00 mm with carrier
Weight	1.2 kg with carrier	1.1 kg with carrier

Hard Drive for HP J4150A

Capacity	18.3 Gigabytes
Rotational Speed	7200 rpm
Average Latency	4.17 microseconds
Data Transfer Rate: Sustained	10 MByte/s
Burst	10 MByte/s (synch) 5 MByte/s (asynch/synch)
Typical Average Seek Time	Read 7 ms Write 8 ms
Power Consumption	13.6 W
Interface Connector	50-pin header-type connection to tower through HP module carrier only
Dimensions	148 mm x 42 mm x 250 mm with carrier
Weight	1.1 kg with carrier

Electrical and Environmental

Power	Must be correctly configured before power attached, or damage may result	At User-Selectable Input Voltage	
		100–127 Vac	200–240 Vac
	Current	2 A	1 A
	Frequency	50/60 Hz	
Environmental	**Temperature**	41–104°F (5-40°C)	
	Humidity	0–80% RHG, noncondensing	
	Acoustics	L NPE 5.5 B, maximum Geraeuschemission LwA=54 dB am fiktiven Arbeitsplatz nach DIN 45635 T.19	
	Heat Dissipation	J4150A: 219 Btu/h J4152A: 228 Btu/h J3278B: 219 Btu/h	
Electromagnetic	**Complies with:**	FCC Part 15, Class B EN 55022 Class-B EN 50082-1 VCCI Class A Canadian EMC Class A requirements Australian EMC Class A requirements For more information, see appendix D.	
Safety	**Complies with:**	EN 60950 / IEC 950 +A1, +A2, +A3, +A4 UL 1950, 3rd edition NOM-019-SCFI-1993 CSA 22.2 No.950	

Supported Network Systems

Novell NetWare	NetWare 3.x, 4.x, 5.x (in compatibility mode only—not pure IP), NetWare/IP
Microsoft Windows	Windows for Workgroups 3.11 Windows 95, Windows 98 Windows NT 3.51, 4.0
IBM	OS/2 Warp Server
UNIX	HP-UX 10.01, 10.10, 10.20, and 11.0 Other NFS-compatible UNIX systems (NFS over UDP/IP on TCP/IP networks)
WWW	Internet/Intranet over HTTP 1.0 and HTML 2.0 compatible browsers
Note: Contact your NOS vendor to verify your Year 2000 readiness.	

Supported Network Protocols/Standards

Novell NetWare	NCP over IPX NCP over NetWare/IP
Microsoft Windows and OS/2	SMB over NetBIOS/NetBEUI SMB over NetBIOS/TCP/IP WINS/NBNS
UNIX	NFS, DNS
WWW	HTTP over TCP/IP
Network Management	ARP, RARP, BOOTP, DHCP, FTP, SNMP, HP Web JetAdmin. Platform-independent configuration and management through standard web browsers.

Security Features

Novell NetWare	Encrypted passwords. Authorization via Novell file server, including NDS.
Microsoft Windows 95, 98	Share-level access control
Microsoft Windows NT	Share-level access control Domain authorization via an NT file server
OS/2 Warp	Share-level access control
UNIX	NFS version 2. PCNFSD authentication via file server.
WWW	Password

Regulatory and Safety Information

Regulatory Statements

FCC Statements

General Information. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Pursuant to Part 15.21 of the FCC Rules, any changes or modifications to this equipment not expressly approved by the Hewlett-Packard Company may cause interference and void the FCC authorization to operate this equipment.

The Federal Communications Commission has prepared a booklet titled Interference Handbook (1986), which may be helpful to you. This booklet (stock number 004-000-004505-7) may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

FCC Class B. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Note Meeting FCC Class B specifications requires shielded cables.

Australia

This equipment complies with Australian EMC requirements.

Canada

This equipment complies with Canadian EMC Class-A requirements.

Japan: VCCI Class A

注意

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づく第一種情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

Taiwan: Class A

警告使用者：這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

European Union

Declaration of Conformity. The following Declaration of Conformity complies with ISO/IEC Guide 22 and EN 45014. It identifies the product, the manufacturer's name and address, and the applicable specifications that are recognized in the European community.

DECLARATION OF CONFORMITY
according to ISO/IEC Guide 22 and EN45014

Manufacturer's Name: Hewlett-Packard Company

Manufacturer's Address: 8000 Foothills Blvd.
Roseville, CA 95747-5502
U.S.A.

declares that the product:

Product Name: HP SureStore CD/DVD-ROM Server

Model Number: J3278B, J4150A, J4152A

conforms to the following Product Specifications:

Safety: EN60950 (1992) +A1,A2,A3,A4,AII / IEC 950 (1991) +A1,A2,A3,A4
EN60825-1 (1994) / IEC 825-1 (1993), Class 1
GB 4943 (1995)

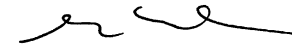
EMC: EN 55022 (1994) / CISPR-22 (1993) Class B
GB 9254 (1988)
EN 55024 (1998)
EN 61000-4-2 (1995)
EN 61000-4-3 (1996)
EN 61000-4-4 (1995)
EN 61000-4-5 (1995)
EN 61000-4-6 (1996)
EN 61000-4-8 (1993)
EN 61000-4-11 (1994)

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC and carries the CE marking accordingly. Shielded cables are recommended to meet the above specifications.

Tested with Hewlett-Packard Co. products only.

Roseville, February 25, 1999



Grant Marten, Product Regulations Manager

European Contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department TRE, Herrenberger Strasse 130, D-71034 Böblingen (FAX:+49-7031-14-3143).

Safety Statements

Follow the basic “Safety Considerations” described on page 2 (the page following the title page in this *User’s Guide*).

Chinese Safety Statement

HP 网络产品使用安全手册

使用须知

欢迎使用惠普网络产品，为了您及仪器的安全，请注意如下事项
1. 仪器要和地线相接。要使用有正确接地插头的电源线，使用中国国家规定的220V电源。
2. 避免高湿度和灰尘多的地方，否则易引起仪器内部部件的损坏。
3. 避免接近高温，避免接近直接热源，如直射太阳光、暖气等其它发热体。
4. 不得有异物或液体落入机内，以免部件短路。
5. 不要将强磁体放置于仪器附近。

警告

为了防止火灾或触电事故，请不要将该机放置于淋雨或潮湿处。

安装

安装辅助管理模块请参看安装指南。

保修及技术支持

如果您按以上步骤正确使用但遇到了问题，或想了解其它产品性能，请按以下方式与我们联络。

如果是硬件故障:
1.与售出单位或当地维修机构联系。
2.惠普维修中心:
北京市海淀区知春路56号　中航科技大厦
邮政编码: 100086
电话: 010-62623888 转 6101
如果是软件问题:
1.惠普技术支持中心热线电话: 010-65053888 转 5858
2.传真自动回复系统: 010-65055280

USA, France: Laser Safety Statement

The HP SureStore CD/DVD-ROM Server contains a laser system and is classified as a "Class 1 Laser Product" under a U.S. Department of Health and Human Services (DHHS) Radiation Performance standard according to the Radiation Control for Health and Safety Act of 1968.

To ensure proper use of this product, please read this *User's Guide* carefully and retain for future reference. Should the unit ever require maintenance, contact an authorized service location.

WARNING!

- ❏ Use of control, adjustments, or performance procedures other than those specified herein may result in hazardous radiation exposure. To prevent direct exposure to laser beam, do not try to disassemble the CD-ROM or DVD-ROM drives.

Germany: Vorsicht

Dieses Gerät ist ein Laser Klasse 1 nach IEC 825. Beachten Sie die Bedienungsanleitung und verwahren Sie diese für späteren Gebrauch.

Geraeuschemission LwA=54 dB am fiktiven Arbeitsplatz nach DIN 45635 T.19

Gerät nicht öffnen. Lassen Sie Instandhaltungsarbeiten durch Vertragswerkstätten durchführen.

VORSICHT!

- ❏ Führen Sie Einstellungen und Prüfungen entsprechend den hier beschriebenen Anleitungen durch, um Gefährdungen durch den Laserstrahl zu vermeiden.

WARNING!

Lifting Precautions

- ❑ HP J3278B SureStore CD-ROM Server,
  HP J4150A SureStore CD-ROM Server Plus, and
  HP J4152A SureStore CD/DVD-ROM Server
  may weigh in excess of 20 kilograms or in excess of 40 pounds (see "Weight" on page C-1 in appendix C). Two people are required to lift the tower.

Mounting Precautions

When you put the tower into a rack, follow these mounting precautions:

- ❑ Use only the HP C2982A CD-ROM Tower Rackmount Kit for mounting hardware.
- ❑ The rack or cabinet should be adequately secured to prevent it from becoming unstable and/or falling over. The tower should be mounted in a position toward the bottom of the rack for stability.
- ❑ Ensure that the tower does not overload the power circuits, wiring, and over-current protection. To determine the possibility of overloading the supply circuits, add together the amperage ratings from the labels of all equipment installed on the same circuits and compare the total with the rating limits for the supply circuits.
- ❑ Make sure that the power source circuits are properly grounded, then use the supplied power cord to connect the server tower to the circuit. See the "Safety Considerations" statements on page 2 (the page following the title page in this guide).

  If your installation requires a different power cord than the one supplied with the tower, be sure to use a power cord displaying the mark of the safety agency that defines the regulations for power cords in your country. The mark is your assurance that the power cord can be used safely with the tower server.
- ❑ Do not install the tower in an environment where the operating ambient temperature might exceed 40°C (104°F).
- ❑ Do not block airflow around the back of the unit.

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